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Bombay Municipality.

RECORD OF THE PROCEEDINGS

OF

THE STANDING COMMITTEE,

1892-93.

133798

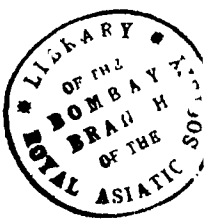
PART II.

VOL. XVI.

Part II.—PROCEEDINGS OF THE STANDING COMMITTEE AND APPENDICES.

PREPARED BY THE

MUNICIPAL SECRETARY.



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PART II.

PROCEEDINGS OF THE STANDING COMMITTEE OF THE MUNICIPAL CORPORATION OF BOMBAY.

BOMBAY, *6th April* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

F. B. CARROLL, Esq., M.I.C.E., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; COWASJEE HORMUSJEE, Esq., C.I.E.; THE HON'BLE MR. FAZULBHOY VISRAM; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; COLONEL G. L. C. MEREWETHER, R.E.; MULJI BHAWANIDAS BARBHAYA, Esq.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 30th ultimo, were signed.

No. 163. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Richardson and Cruddas, for roofing in a portion of the conduit (Tansa Water Works) in the 6th mile near Vandra; (2) with Messrs. H. Cassum & Co., for the supply of clothing to Sub-Inspectors of the Water Works Department; (3) with Mr. Rahim Ibrahim Jamalani, for the supply of firewood for cremation purposes during 1892-93; and (4) with Messrs. James Simpson & Co., Ld., for the supply and construction of four sets of Worthington's pumping engines in connection with sewage works. The seal was also affixed to deed of assignment of the leasehold land, buildings and machinery known as the "Blue Mills," Parel Road.

The seal was also affixed to 2 consolidated debentures Nos. 7401-7600 and 7601-7800 of the Tansa Water Works loan of Rs. 1,00,000 each.

No. 164. *Resolved* :—"That, as applied for by the Commissioner, in his memoranda Nos. 244, 245, 246, 247, 248 and 249, dated 4th instant, sanction be given, under section 351 (2) of the Municipal Act, to

the removal of the following structures built without permission :—

Name of Owner.	Where.
Mr. Rambilas Nirahoo	Building at Nesbit Road.
„ Sitaram Laximon	Do. at Currey Road.
„ Maliba Madhu...	Do. at Suparibagh Road.
„ Mitha Sundar Bhanji	Do. at Sion, Koliwada.
„ Dinanath Dhurmaji	Do. at Parel Chawl Road.
„ Budia Govind	Do. at No. 65, Bhoiwada Road, Parel."

No. 165. *Resolved* :—"That, as applied for by the Commissioner, in his memorandum No. 3360, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 166. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 9, dated 1st instant, and pending the preparation of the detailed statement of unexpended balances of the various lapsed grants (Revenue and Loan) for 1891-92, which sums legally due thereunder must be paid for works in progress and carried to completion, sanction be given, under the terms of section 132 of the Municipal Act, to the payments, *viz.*, (1) for sanctioned works already done and for establishment and labour already employed ; (2) for stores, stationery and other supplies already bought or used, and for printing, advertising and other contingent charges already incurred ; (3) on account of interest and repayment of loans which became due during 1891-92 and previous years, but which still remain unpaid ; (4) adjustment of inter-departmental charges for 1891-92 and previous years ; (5) towards completion of works still in progress up to the limits of the grants already sanctioned ; and (6) payments on account of pensions and gratuities which became due in 1891-92, but which were not drawn by the pensioners on account of illness or other causes."

Considered letter No. 180, dated 2nd instant, from the Commissioner, to the Secretary as under :—

SIR,—With reference to the resolutions of the Corporation, No. 9660, dated 3rd December 1891, and Nos. 12553 and 12956, dated 8th and 18th February last, I have the honor to state that

the Chief Engineer, G. I. P. Railway, reports that he will be unable to complete the sub-way at Chinchpokli within the estimated cost of Rs. 18,495-8-0. He estimates the excess at Rs. 2,194-8-0 and attributes it principally to the pressure to complete the work within the limited time fixed, *viz.*, 31st ultimo. This excess, as well as the amount originally sanctioned, can be met out of the allotment of Rs. 2,10,000 for further expenditure to complete the works from Ghatkoper to Bombay.—I have, &c., H. A. ACWORTH.

Proposed by Colonel Merewether, seconded by Colonel Wilson—

"That with reference to their resolution No. 9660, dated 3rd December 1891, and letter from the Commissioner No. 180, dated 2nd instant, the Corporation be recommended to sanction the payment of an additional grant of Rs. 2,194-8-0, to the G. I. P. Railway Company, for the cost of constructing sub-way, under their line at Chinchpokli, for the passage of the Tansa water main. This amount to be debited to the allotment of Rs. 2,10,000, for further expenditure on the completion of the Tansa works, from Ghatkoper to Bombay."

Amendment moved by K. M. Shroff, Esq., seconded by Kaikhosro N. Kabraji, Esq.—

"That the Executive Engineer, Tansa, be requested to report on the estimates of the cost of this work.

No. 167. It was agreed that the consideration of the motion and the amendment be postponed to allow of the Commissioner's enquiring of the Railway Company whether these will probably be the total additional charges.

No. 168. *Resolved*: "That the following be *recorded*:—Letter No. 85, dated 1st instant, from the Commissioner, reporting that he has sold the rights of cultivating land, cutting grass, catching fish, &c., for 1892-93, as per following list."*

* The total result of the sale shows an increase of Rs. 3,005 as compared with last year's rates.

Comparative Statement shewing the annual amount realized for the right to cultivate, &c., certain Municipal lands and places in charge of the Health Department for the years 1891-92 *and* 1892-93.

Pro No.	Names of Lease-holders.	Description of Lands.	Acres of Land let.	For what purpose.	Amount realized in 1891-92.	Amount realized in 1892-93.	REMARKS.
					Rs. a. p.	Rs. a. p.	
1	Suggaji Ramji and Tukaram Daji.	Municipal reclaimed ground at Coorla except the land occupied by the Tansa Main.	About 60 acres.	Cultivation ...	10,475 0 0	10,600 0 0	
2	Do. do. ...	Do. do. at Sion ...	4½ acres ...	Do. ...	625 0 0	705 0 0	
3	Do. do. ...	Do. do. at Tardeo Flats. Such portions of the Flats as are not required for reclamation purposes.	About 80 acres.	Do. ...	12,025 0 0	15,200 0 0	
4	Lukmidas Jetha	Ground, tank and water course on the west side of Arthur Road.	12½ acres ..	Do. and cutting grass.	2,686 0 0	1,600 0 0	
5	Mulloo Syanna	Ground at Arthur Road and DeLisle Road adjoining the new hospital and sheep market and portion of land on side of Chinchpoogli drain, between DeLisle Road and G. I. P. Railway.	14,735sq.yds.	Do. ...	700 0 0	755 0 0	
6	Jankoo Gopal	Portion of Reclamation ground at Dharavi Road, Mahim.	840 sq.yds.	Cultivation ...	325 0 0	325 0 0	
7	Condaji Mahadoo and Nunda Harry.	Ground at Haines Road Burial ground.	30 acres.	Cutting grass and grazing cattle.	220 0 0	315 0 0	
8	Lukhmidas Jetha	Clerke Road, Old Cemetery, north ...	1 acre.	Do. ...	200 0 0	200 0 0	
9	Jao Antonio Patell	Water channel on Municipal ground at Coorla.	.....	Catching fish ...	40 0 0	60 0 0	
10	Sumadhan Sabha	Ground at Clerke Road, north side ...	3,177 sq.yds.	Cultivation ...	Not let.	520 0 0	
11	Rubaji Janoojee	Warli Reclamation ground.	About 1 acre.	Do. ...	.....	70 0 0	Sold for the first time.
		Milch Cattle Stables.					
12	Jeewa Nusseer...	Kamathipura	.....	Removing cowdung	200 0 0	170 0 0	
13	Shaik Chand	Agripada	.....		85 0 0	75 0 0	
14	Jalall Nusseer	C. Ward stables	.....	.....	30 0 0	20 0 0	
		Total Rupees... ...	.....	.....	27,610 0 0	30,615 0 0	

Resolved : "That the following be forwarded to the Commissioner for favour of remarks and that the applicant be informed accordingly :—Letter dated 2nd instant, from Mr. J. Turner, stating that house No. 550 at Parel Road, Bhendi Bazaar, belonging to one Saho Bhai Peera, is in a dilapidated condition and likely to fall in the rains." No. 169.

The following return was read and *recorded* :—

Return of fires at Chikalwadi and Government House Road (Parel), forwarded with the Commissioner's memorandum No. 30242, dated 28th March 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 3rd April 1892.

Resolved : "That on the application of the Commissioner, resolution No. 13424, dated 2nd March 1892, be modified and passed as under" :— No. 171.

"That, as applied for by the Commissioner, in his letter No. 27409, dated 23rd ultimo, sanction be given to his entrusting the work of repairing the Tulsi main embankment between Mahim and Bandora to Messrs. Framji and Jeewanjee, in continuation of their contract, for repairing the Tulsi main embankment between Mahim and Bandora. The cost, *viz.*, Rs. 10,780, to be met out of the sum of Rs. 22,000, sanctioned for the work by the Corporation, in their resolution No. 11359, dated 14th January last."

Resolved : "That the following be circulated and brought on for consideration at a future meeting :— Memorandum No. 262, dated 4th instant, from the Commissioner, forwarding Counsel's opinion on the question of the effect of section 521 of the Municipal Act." No. 172.

Resolved : "That the following be circulated and brought on for consideration at a future meeting :— Letter No. 265, dated 4th instant, from the Commissioner, requesting sanction, under section 216 of the Municipal Act, to the writing off of the amount of irrecoverable bill, Water, Halalkhor, General and Wheel Tax, as per list submitted therewith." No. 173.

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* *See* Appendix C. † *See* Appendix B.

Proposed by Cowasjee Hormusjee, Esq., seconded by Hurkisondas Nurrotamdas, Esq.—

"That the thanks of the Committee be tendered to the retiring Chairman, Mr. E. B. Carroll, for the able and impartial manner in which he has discharged the duties of the chair."

No. 174.

Carried with acclamation.

BOMBAY, 13*th April* 1892.

AT the first meeting of the Standing Committee held this day, there were present :—

BHALCHANDRA K. BHATWADEKAR, Esq., L.M. ; GEORGE COTTON, Esq. ; COWASJEE HORMUSJEE, Esq., G.G.M.C. ; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKER YAJNIK, Esq. ; KAIKHOSRO N. KABRAJI, Esq. ; K. M. SHROFF, Esq. ; ACCACIO G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner ; and the SECRETARY.

The Commissioner stated that, under the terms of section 49 (*b*) of the Municipal Act III of 1888, he had fixed the holding of the first meeting of the Standing Committee for 3 p.m. to-day, and it was now for the Committee to elect their own Chairman.

Proposed by the Hon'ble Mr. Fazulbhoy Visram, seconded by Colonel Wilson—

"That Mr. George Cotton do take the chair."

Carried.

Resolved : "That the following be *recorded* : Memorandum No. 994, dated this day, from the Commissioner forwarding letter No. 1225, General Department, dated 12th instant, stating that H. E. the Governor *in Council* is pleased to appoint the following gentlemen as members of the new Standing Committee :—

No. 466.

Mr. George Cotton, Colonel Wilson, Mr. Grattan Geary and the Hon'ble Mr. Fazulbhoy Visram."

In accordance with notice, it was

Proposed by Balchandra K. Bhatwadekar, Esq.—

"That Mr. Cowasjee Hormusjee, G.G.M.C., be elected Chairman of the Standing Committee for the ensuing year."

No. 467.

The motion was seconded by K. M. Shroff, Esq., and *carried with acclamation.*

Mr. Cowasjee Hormusjee having taken the chair expressed his thanks for the honor conferred on him by the Committee in thus electing him.

The minutes of the meeting held on the 6th instant were signed.

Colonel Wilson said that before they proceed with the business before the meeting, he would like the Committee to consider the question that has been raised as to whether, as now constituted, they can be considered to be a duly elected body. He therefore suggested that Counsel's opinion be taken on this point in order that no difficulties may arise hereafter as to the validity of their proceedings.

After discussion, the Chairman ruled that it was not for the Committee to move in this matter. They must consider themselves a duly elected body until such time as the contrary is shown.

The business of the meeting was then proceeded with.

No. 468. *Resolved* : "That a Sub-Committee consisting of three members be appointed monthly in alphabetical order to check the weekly audit of accounts."

No. 469. The seal of the Corporation was affixed to deed of contract with Messrs. Tukaram Ramjee & Co., for the supply of sand-stone, sand, shells and shingle during 1892-93.

No. 470. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 990, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 471. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 383, dated 6th instant, sanction be given to the purchase, from Messrs. Richardson and Cruddas, (in continuation of their contract for the supply of pipes for the Agripada house connection work), of 12″ stoneware pipes at the rate of Re. 1·209 or about Re. 1-3-4 per running foot."

No. 472. *Resolved* : "That the consideration of the following be postponed for a fortnight to enable the Commissioner to ascertain whether more favourable rates can be obtained for the supply of the article in question:—Letter No. 641, dated 8th instant, from the Commissioner, requesting sanction to the purchase of 2,000 cases of kerosine oil, 150 degrees proof test, snow-flake brand, at Rs. 3-14-0 per case, from Messrs. Heptoola Sheik Adam & Co."

Resolved : "That, as applied for by the Commissioner, in his letter No. 826, dated 11th instant, sanction be given to an agreement being entered with Messrs. Pandu Kalu, Syed Hoosein Ahmed and Bapaji Essu for the performance of masonry and other piece work, such as the laying of pipes, constructing chambers, &c., in connection with the carrying out of the work for the first drainage section at the same rates as those sanctioned for the work entrusted to Mr. Syed Amoor in the Committee's resolution No. 12208, dated 3rd February last, with the exception that the rate of general excavation be Re. 1-8-0 per 100 cubic feet, instead of Re. 1-12-0, and that the rate for taking up old paving and relaying in common mortar be Rs. 6 per 100 square feet, instead of Rs. 7.

No. 473.

"That, under section 69 (*e*) of the Municipal Act, the contract with Mr. Syed Amoor be so varied as to admit of the above reduced rates being substituted in his contract for the original rates in cases of blocks that will be entrusted to him hereafter.

"That, under the terms of section 72 (3) of the Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as the work which is being done departmentally is urgent, and as the piece work to be done by Messrs. Pandu Kulu, Syed Hussein Ahmed and Babaji Essa will probably in each case be less than Rs. 3,000, in the aggregate."

Proposed by George Cotton, Esq., seconded by A. G. Viegas, Esq.—

"That, as applied for by the Commissioner, in his letter No. 734, dated 9th instant, the Corporation be recommended to sanction the expenditure of Rs. 360, from surplus cash balance,* to meet the cost of leasing from the Port Trust during the current year, 277⅓ square yards of ground in Bassein Street at Rs. 30 a month, such land being required as the site of a disinfecting chamber, as shown on the plan marked A, dated this day, and filed in supplement to minute book."

No. 474.

Carried.

Resolved : "That, as applied for by the Commissioner, in his letter No. 827, dated 11th instant, and in lieu of the resolution of the Committee, (sanc-

No. 475.

* The state of the surplus cash balance is as follows:—Reserved for probable extra grants up to the end of 1891-92, Rs. 79,703; amount of grant already sanctioned Rs. 32,170-6-0; amount recommended for sanction, *nil*. Amount available Rs. 47,232-10-0.

tioning the rent of stall No. 335, Arthur Crawford Fruit and Vegetable Market at Rs. 18 per quarter), sanction be now given to the rent being increased to Rs. 21 per quarter."

Resolved: "That the following be *recorded*:—Letter No. 552, dated 7th instant, from the Commissioner, reporting that he has accepted the offer of one Mr. Mungroo Jugga of Rs. 115, for the right of cultivating vegetables, and fishing in Naigam Tank during the current year."*

No. 476.

Proposed by George Cotton, Esq., seconded by Colonel Wilson—

"That, with reference to their resolution No. 2930, dated 15th June 1891, and as applied for by the Commissioner, in his letter No. 733, dated 9th instant, the Corporation be recommended to sanction the exemption of the following employés from furnishing securities on the ground of the length of service of the officers named:—

No. 477

Health Department.

Inspectors Glover, Hallums and DeSouza.

Assessment Department.

Mr. Yeshwant Shivram, Registrar and Accountant.
„ Manecklal Kirparam, Deputy Accountant.
„ Atmaram Balkirshna, Chief Registration Clerk.
„ Itcharam Mayaram, Chief Registration Clerk.

Engineer's Department.

Mr. Sorabji Burjorji, Chief Clerk.
„ Framji Ruttonji, Head Clerk, Drainage Department.
„ L. C. Fernandez, Storekeeper, Chinchpokli.
„ Manekji B. Moos, Inspector, Water Works.
„ J. Chaves, do. do.
„ R. Azavedo, do. do.
„ Kashinath Devji, do. do.
„ Kharshedji Dhunjibhoy, do. do.

"That future incumbents of the posts held by these officers be required to find security as per the Corporation's resolution as above."

Carried (with 1 dissentient).

Resolved: "That, as applied for by the Commissioner, in his letter No. 556, dated 7th instant, the Committee approve, under section 91 of the Municipal Act III of 1888, of an application being made to Government for the acquisition, under the Land Acquisition Act, of 4,347 square yards of ground situated at DeLisle

No. 478.

* Last year the sale realised Rs. 110.

Road, required for the construction of a new road in the Agripada district, shown in scored red line on the plan marked A, dated this day, and filed in supplement to minute books. The amount to be met out of the 15 lakhs loan for roads in Agripada and elsewhere."

Considered letter No. 557, dated 7th instant, from the Commissioner, to the Secretary, as under :—

SIR,—With reference to Corporation resolution No. 7579 of 15th October last, I have the honour to inform the Standing Committee that I am aware of no present source from which the further amount required for the Colaba Market can be met. The loan provision is Rs. 50,300. The estimate for the building is Rs. 50,269, or practically the entire loan provision. I have reported (No. 12897 of 1st September 1891) that it is not safe to estimate the cost of the land at less than Rs. 45,000, but I greatly doubt whether Rs. 50,000 will not be required. The only possible means of meeting the extra half lakh is by appropriation from the *premia* still available on one or other sum of the following loans :—

	Rs.	a	p.
12 Lakhs Drainage and Water Works Loan	26,887	8	0
Miscellaneous Sanitary Works Loan	21,940	6	7
Agripada House Sullage Loan	4,722	8	0
35 Lakhs Various Sanitary Works Loan	80,969	4	2
Tansa Loan	73,839	10	6

The loan for the Colaba markets was the miscellaneous sanitary works loan, the balance of the premia on which do not suffice for the allotment now required. The sum can of course be easily met from the total balances of premia available, and the Standing Committee may very likely recommend this solution of the question, but I will not myself recommend it, easy as it is to meet the difficulty in this way, because I do not consider it to be in accordance with sound principles of finance to devote premia accruing on a loan raised for one purpose to another purpose totally different from that for which the loan was raised. The only correct course to take in my judgment is to allocate the sum available from the miscellaneous sanitary works loan and to provide for the balance in a future loan, advancing the sum necessary in the meantime from surplus cash balance. A public body always loses in the end by forsaking correct financial principles, though the temptations to do so is often very great, as it is in the present case.—I have, &c., H. A. ACWORTH, Commissioner.

No 479. *Resolved* : "That letter No. 557, dated 7th instant, from the Commissioner, on the subject of building new market at Colaba, be printed and brought on for consideration at the next meeting."

Considered the following :—

No. 20 of 1892-93.

Bombay, *8th April* 1892.

To the COMMISSIONER.

Sir,—Though you are already fully aware of the practical completion of Tansa Works and the introduction of Tansa water into Bombay, I think it is desirable to place on record some points in connection with the works, and I have, therefore, the honor to make the following report :—

1*st*.—On the whole the results of the works may be considered satisfactory.

2*nd*.—The carrying capabilities of the duct in its present condition prove to be considerably in excess of the 17,000,000 gallons per day which had been estimated as the discharging capacity of the siphons. In the 28th paragraph of my report of 1885, I indicated the probability of this result, though to be on the safe side I assumed the discharge as only 17,000,000 gallons. The results of the experiments I have had made show that the siphons are now capable of conveying 22,000,000 gallons. They are now new and their capability will be somewhat impaired by time, but I should not think that it will ever be reduced as low as 20,000,000 gallons.

3*rd*.—The conduits also show better results than had been calculated on ; that is, for given discharges the depths are not as great as those calculated.

4*th*.—The works throughout have stood fairly well, though some defects in design and weak points in construction have shown themselves as was only to be expected on a line of such length.

5*th*.—The arrangements for the screens in the outlet well have proved defective. The masonry pillars have given way, though I have been unable as yet to determine the precise cause of the failure. The failure does not interfere with the efficiency of the well and the screens have been, as a temporory measure, arranged round the entrance to the conduit. The pillars will be rebuilt on a stronger design as soon as the work can conveniently be carried out.

6*th*.—It has been apparent that the high banks in the neighbourhood of the Bassein Creek bridges must be made wider and certain precautions taken to render the line secure.

7*th*.—In the neighbourhood of the Kurla Creek where there are curves, the pipes have shown a tendency to move. It was known that there must be such a tendency, but the movement was much greater than had been calculated on. This, it is believed, is due to the nature of the ground on which the banks rest. Temporary measures had to be taken before the opening to render the line of pipes fit for the conveyance of the water. Plans are under consideration for the permanent remedy of this defect.

8th.—All these works will necessitate further outlay and estimates will be submitted as soon as they can be prepared. In the meantime certain works have had to be taken in hand as the circumstances were such as required prompt action and did not admit of the delay which would be involved in obtaining previous sanctions.

9th.—The next rains will doubtless prove trying to many parts of the work and will bring to right such faults in design and construction as may exist.—I have, &c., W. CLERKE, C.E., Executive Engineer, Tansa Works.

No. 699 *of 9th April* 1892.

Forwarded to the Standing Committee and Corporation. As soon as any estimates are ready they will be sent in.

H. A. ACWORTH, Commissioner.

After discussion it was agreed that the consideration of this report be postponed until next meeting.

Considered letter No. 804, dated 11th instant, to the Secretary, as under:—

SIR,—I have the honour to report for the information of the Standing Committee and the Corporation, that the invoiced value of the iron work, delivered and accepted under Messrs. Macfarlane, Strang & Co.'s contract, is £288,170-19-11. From this sum certain deductions have to be made and I now apply for instructions as to what those deductions should be.

Under clause 2 of the specification attached to their contract, a deviation not exceeding 3 per cent. in excess of the schedule weight of pipes is permitted, and it is provided further, that any pipe having a greater deviation in excess, will be paid for as if it were only schedule weight. The total quantity of pipes delivered has been about 50,000 tons and the excess above the schedule weight of the pipe which exceeds 3 per cent. allowance, is 448 tons or less than 1 per cent. The money value of this excess is £2,612-7-0, the excess above the schedule weight plus 3 per cent. is 148 tons and the money value of this excess is £864-5-0.

The question for determination is whether the larger or the lesser amount should be deducted from the contractors' final bill. On this point Mr. Clerke writes as follows:—

"Having regard to the satisfactory manner in which the contract has been carried out and to the fact that the specified weights have been, on the whole, well adhered to, I recommend that only the latter figure of 148 tons representing a money value of £864-5-0 be deducted from the full weight and value of pipes delivered and accepted."

I have the honour to support this recommendation.

Under article 17 of the contract the contractors are liable for testing charges to replace iron works rejected under article 12. The amount to be deducted under this head is £12-15-0. I

recommend, therefore, that the above deductions only should be made from the invoiced value of iron work delivered. The amount already paid on certificates and advances is £284,897-17-11, leaving a balance, according to this calculation, of £2,396-2-0 payable, which is what I would recommend should be paid in final settlement of all claims by Messers. Macfarlane, Strang & Co.

This will cause an excess of Rs. 38,500 at the current rate of exchange over the provision for iron work included in the revised estimates sanctioned by the Corporation in their resolution No. 8893, dated 12th November 1891, and the two subsequent transfers sanctioned by the Corporation in their resolutions Nos. 12740 and 13769, dated respectively 11th February and 7th March 1892. Pending submission of final account of the Tansa Water Works which have now been practically completed, I propose to meet provisionally the above excess with the sanction of the Corporation by transfer from the provision of rupees one lakh for valve houses on siphon No. 6 and for other works in connection with the duct.—I have, &c., H. A. ACWORTH, Commissioner.

Considered letter No. 805, dated same day, to the Secretary, as under :—

SIR,—In continuation of this office No. 804 of this day, I have the honour to report with reference to the resolution of the Standing Committee No. 1405, dated 6th May 1891, sanctioning the purchase of flanged pipes with lead rings, bolts and nuts at a total cost of £1,300, that the actual cost of the articles amounts to £1,322-17-11, causing an excess of £22-17-11. This excess is partly caused by the Engineer having quoted the rates for the lead rings, bolts and nuts at 3d. and 4d. per lb. for delivery in Bombay instead of at Kurla. For delivery at the latter place the additional rate of 10s. 3d. per ton has been allowed, *viz.*, £2-7-2, (2) by charges for packing cases £11-2-6, and (3) by £9-8-3 for extra quantity of pipes and lead rings obtained. This excess is included in the final payment recommended in my above letter.—I have, &c., H. A. ACWORTH, Commissioner.

Resolved : "That letters Nos. 804 and 805, dated 11th instant, from the Commissioner, be printed on the minutes of this meeting and brought on for consideration next week."

No. 480.

Considered the following :—Resolution of the Corporation, dated 11th instant, as under :—

"1. That the thanks of the Corporation be and are hereby accorded to Mr. W. Clerke, Engineer-in-Chief of the Tansa Water Works, for the able and efficient manner in which he carried through the works to a successful completion.

"2. That the Corporation will be prepared to accord its sanction to such grant as may be recommended by the Standing Committee for suitably engrossing and enclosing its resolution."

Proposed by George Cotton, Esq., seconded by Hurkisondas Nurrotamdas, Esq.—

"That the Commissioner be asked to favour the Committee with his recommendations as to the best means of engrossing and enclosing the vote of thanks to Mr. Clerke at a cost not exceeding Rs. 1,500."

No. 481.

Carried (2 dissentients).

It was agreed that the further consideration of the following be postponed till next week :—Resolution of the Corporation No. 13965, dated 10th ultimo, forwarding for remarks Government letter No. 472, General Department, dated 13th February 1892, on the subject of the banking of Municipal funds, and letter No. 29576, dated 19th idem, from the Commissioner thereon.

Resolved : "That the following be *recorded* :—Memorandum No. 322, dated 6th instant, from the Commissioner, reporting, with reference to the resolution of the Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 2,19,062-5-4—(1) of Rs. 2,500, from the 6 per cent. Municipal Loans Sinking Fund deposit account, to the Municipal General Fund pass-book, on 28th ultimo ; (2) of Rs. 876-11-5, from the Municipal Building Fund deposit account, to ditto on ditto ; (3) of Rs. 56, from the 5 per cent. Municipal Loans Sinking Fund deposit account, to ditto on ditto ; (4) of Rs. 82,000, from the Tansa Loan deposit account No. 1, to ditto on 29th idem; and (5) of Rs. 1,33,629-9-11, from the 12 Lakhs Drainage and Water Works loan deposit account, to ditto on 3rd idem."*

No. 482.

Resolved : "That the following be forwarded to the Commissioner for report and that the applicants be informed accordingly :—Letter, dated 11th instant, from Mr. Damodher Raoji and other residents of Ganesh Ramjee's chawl, Girgam, complaining of an insufficient supply of water."

No. 483.

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* The balances remaining to the credit of the above funds after effecting the transfers are (1) Rs. 1,500 in cash, (2) Rs. 8,00,000 in 5 per cent. Municipal Debentures of Rs. 8 Lakhs, (3) Rs. 4,24,747-13-9 (Rs. 4,24,500 in 5 per cent. Municipal debentures for that sum and Rs. 247-13-9 in cash), (4) Rs. 2,65,000 in 5 per cent. Municipal debentures for that sum, and (5) Rs. 2,51,013-12-9 in 4 per cent. Government paper for Rs. 2,55,000.

The following return was read and *recorded* :—

Return of fires at Victoria Bunder (Lower Colaba) and Cooperage, forwarded with the Commissioner's memorandum No. 266, dated 4th April 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 10th April 1892.

No. 485. *Resolved.* "That, as applied for by the Commissioner, in his letter No. 484, dated 12th instant, and with reference to the Committee's resolution No. 13797, dated 9th ultimo, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 3 tons 6 cwts. and 14 lbs. of coal in addition to and at the same rate and on the same conditions as those sanctioned in the said resolution."

No. 486. *Resolved:* "That, as recommended by the Commissioner, in his memorandum No. 992, dated this day, sanction be given to Mr. W. Clerke, Executive Engineer, Tansa Water Works, availing himself of 175 days' leave due to him, under the terms of the late Town Council's resolution No. 964, dated 6th October 1886, from the 14th instant, or from such subsequent date as he may wish to avail himself of it."

Proposed by George Cotton, Esq., seconded by Grattan Geary, Esq.—

No. 487. "That sanction be given to the acceptance of Mr. E. Wimbridge, of the East India Art Manufacturing Co.'s tender for the supply of furniture for the new Municipal Office, at schedule rates, amounting to Rs. 91,292-8-0."

Carried.

Proposed by George Cotton, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

No. 488. "That, with reference to their resolution No. 9660, dated 3rd December 1891, and letter from the Commissioner No. 180, dated 2nd instant, the Corporation be recommended to sanction the payment of an additional grant of Rs. 2,194-8-0, to the G. I. P. Railway Co., for the cost of constructing subway under their line at Chinchpokli for the passage of the Tansa Water main. This amount to be debited to the allotment of Rs. 2,10,000, for further expenditure on the completion of the Tansa Works from Ghatkoper to Bombay."

Carried.

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* *See* Appendix **D**. † *See* Appendix **B**.

BOMBAY, *20th April* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.C.M.C., *Chairman.*
BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M.; GEORGE COTTON, Esq.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON,
H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 13th instant, were signed.

The seal of the Corporation was affixed to deed of contract with Messrs. Richardson and Cruddas for the supply of certain ironwork for the Water Works Department.

The seal was also affixed to—(1) 17 attested duplicate debentures of the Municipal loan of 1878 of Rs. 500 each, Nos. 3415, 3416, 3497, 3500-6 and 4922-28; (2) to 6 consolidated debentures of the Municipal loan of 1878 of Rs. 500 each, Nos. 3622-31 (of Rs. 5,000), Nos. 3632-41 (of Rs. 5,000), Nos. 3642-46 (of Rs. 2,500), Nos. 3975-84 (of Rs. 5,000), Nos. 3985-94 (of Rs. 5,000), Nos. 3995-99 (of Rs. 2,500).

No. 520. *Resolved*: "That, as applied for by the Commissioner in his memoranda Nos. 1082 and 1144, dated 14th and 16th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission:—

Name of Owner.	Where.
Mr. Malji Mulchand	Girgam Back Road.
„ Shamji Moolji	Matunga Village."

No. 521. *Resolved*: "That, as applied for by the Commissioner in his memorandum No. 1254, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 522. *Resolved*: "That the following be *recorded* :—Letter No. 883, dated 12th instant, from the Commissioner, reporting that he has accepted the offer of Rs. 30 from one Mr. J. M. D'Silva for the right of fishing in the Pawai Lake during 1892-93."*

No. 523. *Resolved*: "That the following be *recorded* :—Letter No. 1150, dated 16th instant, from the Commissioner, reporting that he has sanctioned the purchase of 100 brass of red earth, at Rs. 5 per brass, delivered at the Victoria Gardens, from Mr. Mukund Limbaji, and 30

* The same amount was realized last year.

brass, at Rs. 7-8 per brass, delivered at the Elphinstone Circle Garden from the same person. The cost to be met from the grant for the purchase of earth for gardens."

Resolved : " That the following be *recorded* :—Letter No. 1137, dated 16th instant, from the Commissioner, reporting that he has sanctioned the purchase of 15 gates to be provided at each end of the siphons on the Tansa line from Messrs. Richardson and Cruddas at the rate of Rs. 95 per gate. The cost to be met out of the balance of the Rs. 1,00,000 reserved for valve-houses on siphon No. 6 and other works in connection with the Tansa dam."

No. 524.

Considered letter No. 993, dated 13th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to report that I have granted three months' privilege leave to Mr. Tomlinson from 30th July next. For the discharge of his duties during his absence no better arrangement could, I think, be made than to appoint Mr. T. C. H. White, Deputy Executive Engineer, Tansa Water Works. Mr. White will, during the period in question, be in sole charge of the Tansa Water Works, and it is, of course, not to be expected that he will undertake Mr. Tomlinson's duties in addition to his own without some extra emoluments. His pay is Rs. 1,000 per mensem, and I would recommend an acting allowance to him of Rs. 250 per mensem during the three months in question, which can be met from savings on the Water Works budget.—I have, &c., H. A. ACWORTH, Commissioner.

Proposed by Grattan Geary, Esq., seconded by George Cotton, Esq.—

" That letter No. 993, dated 13th instant, from the Commissioner, reporting that he has granted Mr. Tomlinson, Deputy Executive Engineer, Water Works, three months' privilege leave from the 30th July next, and has appointed Mr. T. C. H. White, Deputy Executive Engineer, Tansa Works, in addition to his own duties, to act for Mr. Tomlinson, be *recorded.*

No. 525.

" That, with reference to their resolution No. 13292 of 1891, the Corporation be recommended to sanction, as a special case, the payment to Mr. T. C. H. White of Rs. 250 per mensem whilst acting as Deputy Executive Engineer, Water Works, in addition to his salary as Deputy Executive Engineer, Tansa Water Works.

" The cost of the acting arrangement to be met by a grant from surplus cash balance."

Carried.

No. 526. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 1086, dated 14th instant, the Committee approve, under section 381 of the Municipal Act, of a notice in writing being served upon Mr. Rowjee Ballajee Gowlee, calling upon him to fill in with sweet earth the low-lying ground belonging to him at Arthur Road to the level of the public road thereat."

No. 527. *Resolved* : "That, as applied for by the Commissioner in his letter No. 1085, dated 14th instant, the Committee approve, under section 381 of the Municipal Act, of a notice in writing being served on Mr. Hirjee Dharsi, calling upon him to fill in with sweet earth a hole belonging to him and adjoining a tannery at Dharavi, which has become very foul in consequence of tannery refuse being allowed to find its way into the hole."

It was agreed that items 10 and 13 on the agenda paper be taken together.

Considered letter No. 964, dated 12th instant, from the Commissioner, to the Secretary, as under:—

SIR,—I have the honour to state that the Executive Engineer, Tansa Works, has found it necessary to revise the establishment provided for the maintenance of the Tansa Works at a cost of Rs. 48,000 in the current year's budget for 8 months from 1st March 1892. I append the revised statement, from which it will be seen that it is slightly in excess of the original statement. This excess is due to the increase in the number of sluicemen by 2 and to the provision for 24 assistant sluicemen, which Mr. Clerke considers necessary. By this arrangement there will be an excess of Rs. 241-10-8 over the original grant, which I request the Standing Committee to recommend the Corporation to sanction by a transfer from the provision of Rs. 1,59,513-11-10 for works during the year.

I also append statement No. 2 shewing the establishment which, Mr. Clerke thinks, will be required for works still in progress and which will be more or less in progress during the period from March to October.

The cost of this establishment for seven months will be Rs. 12,817, to which must be added the actual cost of establishment employed during the month of March, *viz.*, Rs. 2,638-1-0, or Rs. 15,455-1-0 in all.

I request the Standing Committee to recommend the Corporation to sanction the payment of this sum by a transfer from the provision above referred to.—I have, &c., H. A. ACWORTH, Commissioner.

STATEMENT No. 1.

To be substituted for that sanctioned at page 78 of the Budget, 1892-93.

No.	Name.	Designation.	Amount Rs.	a.	p.
1	W. Clerke, Esq., M.I.C.E. ...	Executive Engineer	1,800	0	0
	Pension Contribution ...	Do.	233	5	4
1	T. C. H. White, Esq., C.E. ...	Deputy Executive Engineer ...	1,000	0	0
1	Mr. N. D. Bhada	Supdt. of Works	450	0	0
2	„ J. Greengrass	Asstt. Supdts. of Works, at Rs. 250 each...	500	0	0
	„ Maneklal Narbheram ...				
...	„ G. B. Rishi	Inspectors, at Rs. 180 each ...	360	0	0
	„ V. J. Agashi...				
1	„ J. N. Heeramanek	Inspector	120	0	0
2	„ Dipakram Naenitram ...	Do. at Rs. 110 each ..	220	0	0
	„ S. Reggo				
1	„ T. Elsom	Inspector	60	0	0
1	„ D. F. Pereira	Draftsman...	65	0	0
1	„ Jehangir Adarji	Head Clerk	150	0	0
1	„ T. Oliviera	Clerk	75	0	0
1	„ A. P. Subuis...	Do.	50	0	0
...	„ R. L. Karnik	Sub-Divisional Clerks, at Rs. 40 each	120	0	0
...	„ Shivlal Motiram				
...	„ Nasarvanji N. Antia ...				
1	.....	Havildar	13	0	0
2	.....	Peons at Rs. 12	24	0	0
9	.....	Do. Rs. 10	90	0	0
24	.....	Sluicemen at Rs. 14 each ...	336	0	0
24	.....	Asstt. Sluicemen at Rs. 12 each.	288	0	0
1	.....	Audit Clerk in Chief Accountant's Office...	100	0	0
1	.....	Do. do.	25	0	0
		Total Rs. ...	6,079	5	4

STATEMENT No. 2.

Chargeable to works in progress.

		Rs.
1	Inspector Mr. R. V. Karandikar	150
1	Fitter	50
1	Maistri	50
18	Do. at an average pay of Rs. 35	630
3	Bridge lascars @ Rs. 17 each	51
90	Lascars @ Rs. 10 each	900
	Rs. ...	1,831

Considered also item No. 13, memorandum No. 999, dated 9th instant, from the Commissioner, and Mr. Clerke's report No. 20, dated 8th idem.*

Proposed by George Cotton, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

"(1.) That memorandum No. 699, dated 9th instant, from the Commissioner, forwarding report† from the Executive Engineer, Tansa Water Works, on the completion of the works, to be submitted to the Corporation.

No. 528.

* *See* pp. 14 and 15 of the Committee's printed minutes of the 13th of the same.
† *See* pp. 14 and 15 of the Proceedings of the Standing Committee, dated 13th instant.

"(2.) That letter No. 964, dated 12th instant, from the Commissioner, be also forwarded to the Corporation.

"(3.) That the Corporation be recommended to sanction the revised establishment of the Tansa Water Works (as per Statement No. 1), showing net excess on the original estimate of Rs. 241-10-8, to be met by a transfer from the balance (Rs. 1,59,513-11-10) of the Budget provision of two lakhs for the works during the year.

"(4.) That the Corporation be further recommended to sanction the establishment (as per Statement No. 2) required for works still in progress, and which will be more or less in progress during the period from March to October, amounting to Rs. 12,817, *plus* Rs. 2,638-1-0, being the cost of establishment employed during March last. Total Rs. 15,455-1-0. This amount to be met by a transfer from the same Budget provision."

Carried.

Considered the following :—

No. 39 of 1892-93.

BOMBAY, 12*th April* 1892.

TO THE COMMISSIONER.

SIR,—I have the honour to make the following two suggestions for the favour of your consideration, and should you consider them not unreasonable, I would ask you to take such steps as you may deem necessary to give effect to them.

1*st*—Mr. White remains on until October next in charge of the Tansa Works. By that time he shall have been employed on the Tansa Works for more than 5½ years. It is unnecessary for me to speak here of his services. In the letter of the Municipal Commissioner appointing him (No. 8818, dated 18th October 1886), it is stated that such occasional leave will be granted him, subject to the exigencies of the work, as may subsequently be arranged. He has not had any of this leave during his service, and I would recommend that on the completion of his engagement, he be given six months' leave on full pay, or what amounts to the same thing, that he be given a bonus of six months' pay.

2*nd*.—The four principal sub-divisional officers on the duct works, namely :—

MR. NUSSERWANJI D. BHADA,
" J. GREENGRASS,
" NOWROJI H. KATRAK,
" MANEKLAL NURBHERAM,

have been on the works almost from the very beginning, and have been employed till the time of opening nearly continuously. I can speak highly of the services rendered by them all. They have had to carry out their duties under very trying conditions at times, and all of them have suffered more or less from the effects of the climate. I would recommend that, in recognition of the good service they have done, a sum of Rs. 10,000 be divided equally between them as a bonus.—I have, &c., W. CLERKE, C. E., Executive Engineer, Tansa.

No. 977 of 13*th April* 1892.

Forwarded to the Standing Committee and Corporation for favourable consideration. The Commissioner would be very glad to see Mr. Clerke's recommendations approved. H. A. ACWORTH, Commissioner.

Proposed by Colonel Wilson, seconded by the Hon'ble Mr. Fazulbhoy Visram—

"(1.) That memorandum No. 977, dated 13th instant, from the Commissioner, be forwarded to the Corporation.

No. 529.

"(2.) That the Corporation be recommended to sanction, in consideration of the services rendered by Mr. White in connection with the Tansa Water Works, the payment of a bonus equal to six months' of his salary in lieu of leave of absence on full pay during the same period.

"(3.) That the Corporation be further recommended to sanction the payment of a bonus, amounting to Rs. 10,000, to the following four principal sub-divisional officers on the duct line works, in consideration of the services rendered by them during the construction of the Tansa Water Works, *viz*, Messrs. Nusserwanji D. Bhada, J. Greengrass, Nowroji H. Katrak and Maneklal Nurbheram." The amount to be met as an advance from surplus cash balance to be hereafter adjusted against savings on the works."

Amendment, moved by Bhalchundra K. Bhatawadekar, Esq., seconded by Kaikhosro N. Kabraji, Esq.—

"(1.) That memorandum No. 977, dated 13th instant, from the Commissioner be forwarded to the Corporation.

"(2.) That the Corporation be recommended to sanction, in consideration of the services rendered by Mr. White in connection with the Tansa Water Works, the payment to him of a bonus of Rs. 4,000.

"(3.) That the Corporation be further recommended to sanction the payment of a bonus, amounting to Rs. 6,000, to the following four principal sub-divisional officers on the duct line works in consideration of the services rendered by them during the construction of the Tansa Water Works, *viz.*, Messrs. Nusserwanji D. Bhada, J. Greengrass, Nowroji H. Katrak and Maneklal Nurbheram. The amount to be met as an advance from surplus cash balance to be hereafter adjusted against savings on the works."

On a division the *amendment* was *lost*, the votes being 4 *for* and 6 *against*.

For the original motion there were 5 votes *for* and 5 votes *against* : the Chairman gave his casting vote in favour of the motion, which was *carried*.

No. 530. *Resolved* : "That, as the estimated cost of the new market for Colaba, including the cost of land for site of same, amounts to Rs. 1,00,300, of which Rs. 50,300 is available from the Budget grant, the Corporation be recommended to sanction the payment of the balance of Rs. 50,000 by transferring Rs. 21,940, savings on the Miscellaneous Sanitary Works Loan, and by the advance of Rs. 28,060 from surplus balances, to be adjusted hereafter by debit to loan charges."*

No. 531. *Resolved* : "That, as applied for by the Commissioner in his letter No. 805, dated 11th instant, the Standing Committee, in continuation of their resolution No. 1405, dated 6th May 1891, sanction the payment of £22-17-11 to Messrs. Macfarlane, Strang and Co., being excess over the sanctioned cost of flange pipes with lead rings, bolts and nuts."†

"2 That, under the terms of section 69 (E) of the Municipal Act, the Committee sanction the variation of the contract as above with Messrs. Macfarlane, Strang and Co., to allow of the extension of the time for the supply of iron work from 1st July 1890 to 30th April 1891."‡

Proposed by George Cotton, Esq., seconded by Colonel Wilson—

"That letter No. 804, dated 11th instant, from the Commissioner, be forwarded to the Corporation with the following recommendations :—

"(1.) That, in lieu of the provisions in the second clause of the specification of the contract with Messrs. Macfarlane, Strang and Co., for the supply of mains and fittings for the Tansa Water Works, under which a deduction of £2,612-7-0, *plus* testing charges, would be due, sanction be given to the deduction (1) of £864-5-0 only on account

* See page 18 of the Proceedings of the Standing Committee, dated 13th instant.
† This amount is included in the grant of £2,396-2-0 as above.
‡ See page 16 of the Proceedings of the Standing Committee, dated 13th instant.

of pipes that were more than 3 per cent. in excess of the schedule weight, and (2) to the deduction of £12-15-0 on account of testing charges incurred in replacing iron work rejected under article 17 of the contract.

"(2.) That sanction be given to the payment of £2,396-2-6 to Messrs. Macfarlane, Strang and Co. in final settlement of all their claims, the amount to be met provisionally by a transfer from the balance of the sum of Rs. 1,00,000 provided in the revised estimate for the construction of valve-houses on siphon No. 6, and for other works in connection with the Tansa duct."

Amendment, moved by A. G. Viegas, Esq., seconded by Bhalchundra K. Bhatawadekar, Esq.—

"That deductions from the final accounts of Messrs. Macfarlane, Strang and Co. be fixed at £2,612-7-0."

This amendment was carried, but it was pointed out that it would be wholly incomplete if passed in its present form as a substantive motion, and after discussion it was agreed, on the motion of Mr. Geary, seconded by Mr. K. M. Shroff, that the consideration of this question be postponed till next week.

The further consideration of the following was also postponed till next week:—Resolution No. 13965, dated 10th ultimo, forwarding for remarks Government letter No. 472, General Department, dated 13th February 1892, on the subject of the banking of Municipal funds, and letter No. 29576, dated 19th idem, from the Commissioner thereon.

Resolved : "That the Corporation be informed, with reference to letter, dated 14th March last, purporting to be from Mr. S. S. Gadgil, that the works to the house in Sheik Memon Street, of which complaint is made, consisted in the removal of a 4-inch partition wall on the ground-floor, whitewashing and painting, and were of so trivial a nature that the Municipality could take no action in the matter.

No. 532.

"That in his letter No. 474, dated 11th instant, to the Commissioner, the Acting Executive Engineer reports that the name under which this complaint is made is a fictitious one."

Resolved : "That the following be *recorded* :—Memo-
No. 533. randum No. 1145, dated 16th instant, from the Commissioner, forwarding analyses of water as under :—

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir on 8th April 1892.

	Parts per million.
Free Ammonia	·02
Albumenoid Ammonia	·18

Sample of unfiltered Tulsi water obtained from the Inlet, Malabar Hill Reservoir, on 8th April 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·18

Sample of filtered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 8th April 1892.

	Parts per million.
Free Ammonia	·04
Albumenoid Ammonia	·10

Sample of water taken from 27" Tansa Main in Arthur Road from a Hydrant on the 8th April 1892.

	Parts per million.
Free Ammonia	·06
Albumenoid Ammonia	·12"

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 17th April 1892.

Resolved :— "That, as applied for by the Commissioner,
No. 534. in his letter No. 1187, dated 18th instant, the Committee approve, under section 169 (*b*) of the Municipal Act, of the following compounded water rate being charged to Government for water supplied to plots actually occupied on Wellington Lines, *viz.* :—

For each large plot Rs. 2 per month.

For each small plot Re. 1 per month.

"That these charges be subject to modification should they, from metre readings, prove to be insufficient."

Resolved : "That the following be *recorded* :—Letter
No. 535. No. 1237, dated this day, fom the Commissioner, reporting that he has sanctioned the purchase of clothing, as per lis submitted, from Messrs. H. Cassum and Co., for the Fire Brigade Staff. The amount Rs. 2,933-12-0 to be debited to the current year's Budget provision of Rs. 3,000 for the same."

* *See* Appendix C.

BOMBAY, *27th April* 1892.

At the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.G.M.C., *Chairman*.
BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L. M.; GEORGE COTTON, Esq.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO NOWROJI KABRAJI, Esq.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 20th instant, were signed.

No 723. The seal of the Corporation was affixed to deeds of contract (1) with Mr. Hormasjee Dorabji Gazdar, for the removal of offal, from the Bandora Slaughter-houses, for a period of five years, from 1st March last; (2) with Messrs. Fakirji Pestonji & Co. for annual repairs, petty works and supply of labour and building materials; and (3) with the Bombay Gas Company, for the supply of coke during 1892-93.

The seal was also affixed to 7 attested duplicate debentures of the Municipal Loan of 1878 of Rs. 500 each, Nos. 1449 to 1455, both inclusive, and to 8 attested duplicate debentures of the Municipal Sanitary Works Loan of 1885 of Rs. 500 each, Nos. 1879 to 1886 N. N., both inclusive.

No. 724. *Resolved* : "That, as applied for by the Commissioner, in his memoranda Nos. 1305 and 1306, dated 21st instant, sanction be given, under the terms of section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Name of Owner.	Where.
Mr. Mahomed Ali Allibhoy	Building at Ripon Road.
,, Mainel Kalsakar	Do. at Mahim Bazaar Road."

No. 725. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 1772, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

Considered the following :—

No. 29576 OF 1891-92.

To THE MUNICIPAL SECRETARY.

BOMBAY, 19*th March* 1892.

SIR,—I have the honour to offer the following observations on the memorandum from the Accountant-General relative to the banking of Municipal funds forwarded by Government to the Corporation under Mr. Chief Secretary Mackenzie's letter No. 472 of 13th ultimo.

2. With reference to the analogy drawn by the Accountant-General between the Port Trust and the Municipality, I have already given my reasons in the course of debate for thinking that, for the purposes of the present question, no such analogy exists. That the Port Trust and the Municipality occupy wholly distinct positions in respect of their financial liabilities is strongly illustrated by the policy which Government have adopted towards the one and the other in this matter.

The Port Trust debt stood on 31st March 1891 at Rs. 4,93,70,035. Of this sum, Rs. 3,60,58,359 were payable to Government, the original lenders; Rs. 75,42,800 were payable to the general public, but were guaranteed by Government (section 35, Port Trust Act of 1879), and only Rs. 57,68,876 were unguaranteed debt due to the public. In other words, no less than 89 per cent. of the whole Port Trust debt, of nearly 5 crores, had been lent by Government or raised on the Government guarantee. The debt of the Municipal Corporation, at the same date, amounted to Rs. 3,24,27,864. From this must be deducted, for the purposes of the present comparison, the Vehar debt, which was taken over with the Vehar Water Works, and amounted to Rs. 27,10,366. This leaves a balance of Rs. 2,97,17,498, out of which Rs. 46,70,998 had been lent by Government, and the whole remainder, Rs. 2,50,46,500, had been raised in the open market on the credit of the Municipality unsupported by the Government guarantee. In other words, while the proportions of the Port Trust debt raised with and without the assistance of Government are *89 and 11 per cent., the proportions of the Municipal debt are 15 and 85 per cent. I submit that this preponderance of State interest in the Port Trust debt, as compared with that of the Municipality, affords a very strong reason indeed why Government should insist in the one case and not in the other on asserting a right to interfere in details of financial management.

3. But the claim of the Municipality not to be put in the same category with the Port Trust may be urged on somewhat higher grounds, and these, no doubt, have been present to the mind of His Excellency in Council. The Port Trust is a body which exists simply for business purposes and the convenience of the trade of the Port. The Municipality also exists for the more convenient management of civic affairs; but it has another end, that of popular education in the important functions of administration and government, which every restrictive enactment which is not an absolute requisite of its existence, cannot but retard. I doubt not that the paramount power, which has now for so many years insisted that the Municipality shall depend upon itself, and apply the resources of credit which are within itself, for and to its financial requirements, has had continually in view, as a most important collateral object, to instruct the local body so to administer its affairs as to justify the confidence of investors, and create, command and main-

* If Rs. 75,42,000 taken over by the Port Trust under their Act of 1879 be eliminated, the proportions will be 87 and 13.

tain that position in the view of capitalists which maladministration would surely sacrifice. This great and valuable lesson has, it may fairly be asserted, found no unreceptive pupil, and the estimate at which unguaranteed Municipal securities are now held in the money market is a proof that it has been laid to heart. Whatever the Accountant-General, who naturally looks at the question from a point of view which does not embrace such considerations as these, may think, I can hardly doubt that Government will accept the logical consequence of its own policy, and recognize the essential difference between the Municipality and a body like the Port Trust, which includes no such high purpose within the scope of its useful business avocations.

4. Para. 3 of the Accountant-General's memorandum is, I think, a little captious. The Corporation did not assert (*vide* resolution 5732 of 24th August 1891) that "no restriction was placed upon them in the matter of raising taxes," but that "no restriction was placed upon them in the matter of raising taxes *under the Act*." The Corporation would hardly have been guilty of the self-evident absurdity of stating that they had absolute power to raise any taxes they liked, of any character and of unlimited extent. What they obviously meant to say was, that outside the specific directions of the Statute no restriction is placed upon them, either as to the extent or the character of the taxes they shall choose to raise, or as to the proportionate amounts they shall devote to various objects of Municipal expenditure. The Act allows them to levy a water tax limited only as to its extent by their own ideas as to what "is reasonable with reference to the expenses of water supply," a halalkhor tax which may reach 3 per cent. on rateable values, a general tax which may be 12 per cent. on rateable values, and which is in fact 8 per cent. The provisions contained in sections 141 and 142 of the Act are so wide as practically to cover the whole City, and both these provisions and those in section 143 exist, not because any abuse of power requires to be guarded against, but simply in order to define for the guidance of the Municipality what the ruling principles of the rating of real property, as evolved in countless legal decisions here and in England, should be. The same remarks apply *mutatis mutandis* to sections 181, 193 to 195, and so on. All Municipal administration in Great Britain as well as in India requires to have its boundaries defined for it, just as Imperial administration does; but this does not affect the absolute accuracy of the assertion that within those statutory boundaries the Corporation are left wholly uninterfered with. The general tax might be 8 per cent. or 12 per cent. as the Corporation chose to determine, but though Government, like other property holders, would be pecuniarily affected, Government would have no power of interference with the order of the Corporation. It is hardly needful to pursue the argument into the side of expenditure. The obligatory duties and the powers of the Corporation are defined in sections 61 to 63. In the first it is not a matter of the slightest concern to Government how much the

Corporation spend upon each so long as the duty is discharged ; in the second also the discretion is left to the Municipality unconfined except in one small detail [section 63 *l*]. Government have the power of interposition in case of neglect on the part of the Corporation to discharge what they deem an obligatory duty, and they have recently exercised it ; but this power of interposition and this particular case of the exercise of it have nothing whatever, I believe, to do with financial control. The power exists, and has been exercised, solely for administrative reasons, and I am certain that Government would not deduce from it, as the Accountant-General has done, an argument in favour of the assertion that the financial dominion of the Corporation over their revenues is not complete.

5. The interpretation of Section 122 in the latter part of the Accountant-General's para. 3 is, I think, incorrect, as his analogies in the same passage are unsound. I believe it is utterly impossible to conceive of a reason for the limitation contained in that section, except either distrust of the discretion of the Corporation or a desire to favour the Bank. As the second can have no force, the former must be the reason for the existence of the section. The analogy from Trust funds is fallacious for two reasons ; in the first place, because it undoubtedly *is* the fact that one reason for demanding the safeguards referred to by the Accountant-General is, that the discretion of trustees is not to be fully depended on ; in the second place, because unless they did exist and the trustee was thereby protected, no one would accept the office of trustee, and they are therefore a requisite of the practical existence of all trusts. The reference by the Accountant-General to "the safeguards usually adopted for the proper care and security of public funds" is peculiarly unhappy, for it is one of the most important arguments in support of the municipal case that these safeguards are nowhere thought necessary in the case of any borough or municipality occupying anything like the position of the Municipality of Bombay. No borough in Great Britain is under any such restriction, while of the other two Presidency towns in India, one, Calcutta, has complete, and the other, Madras, almost complete freedom. I feel quite certain that Government will not think of comparing, as the Accountant-General does (para. 6), the municipalities or local boards of the Mofussil with such a body as the Municipality of Bombay, or of reasoning that because their balances remain with Government without interest, therefore the balances of this Corporation should remain with the Bank of Bombay without interest. I cannot but express my astonishment that any such comparison should have been thought befitting the case. But I may add, as the comparison has been made, that there is no good reason to my mind why the funds of the small local bodies should lie barren.

6. With reference to his para. 5, I am not aware that the Accountant-General has any right to dogmatize as to what was, and what was not, "contemplated in the constitution of the Municipality," and the whole argument in this para., starting with the assumption that the Corporation desire to enter upon a career of

speculation, proceeds upon a basis which I do not think is reasonable, *viz.*, that every operation of the Corporation requires to be hedged round with precautions, and that body watched and guarded and checked like an infant institution. If, however, any conclusion is to be drawn from what was "contemplated in the Municipal constitution," I would enquire what the legitimate conclusion is as to the intention of the legislature which framed the existing constitution of the Municipality, when it enacted in Section 122 of the Act, that the surplus monies of the Municipality should lie at the Bank of Bombay—"*at interest.*" There is no occasion for any vague speculation here, the intention of the legislature is unquestionable, and the practical object of the Municipality is to have that intention carried out. It is exceedingly improbable, I should think, that even if the freedom they ask for were granted to them, the Corporation would actually engage in such operations as lending their money on the security of Government paper, and certain that they would not engage in "speculative investments." All that they desired to point out to Government was that they are under such restrictions as debar them from profiting by their balances even in ways which could by no possibility be cavilled at as unsafe. All that the Accountant-General says in the latter part of his para. 5 may be very true, but the Corporation are quite as keenly alive to these considerations as any one else can be, and may be fully trusted not to embark in financial operations beyond the power of their administrative machinery to deal with; as fully, for instance, as the Calcutta Corporation, who have never, it is believed, given any cause for animadversion on a similar account, though they possess the freedom which the Bombay Corporation solicit.

7. Para. 7 of the Accountant-General's memorandum may be accepted as an adequate reply to para. (*j*) of the resolution of the Corporation, though I do not think that the reasoning in the earlier part of it is sound, but I will not spend time in any attempt to refute it.

8. It might be well to ask for an amendment of Section 112 as well as of Section 122, but the Accountant-General's interpretation (para. 8) of the term "surplus monies" seems too narrow. I take it that the phrase (Section 122) "surplus monies at the credit of the Municipal Fund not required for current charges" must embrace the entire cash balance of the Municipality beyond what is required for current charges. In point of fact, reading Sections 112 and 122 together, it seems clear that while the former relates to the entire bulk of the Municipal fund, the latter includes also the whole of that fund minus the sum required for current charges. I think the words "not required for current charges" in Section 122 amount to, and are meant to amount to, a definition of the term "surplus monies," that is to say, all monies whatever which are not immediately required for expenditure. I do not suppose the Accountant-General intends to limit the meaning of "surplus monies" so as to

make it equivalent to "Sinking Fund." I will take an instance or two to illustrate this. In 1886-87 and 1887-88, 47 lakhs were raised by loan for expenditure on the Tansa Water Works, but, owing to default in carrying out their work by the contractors for the Duct, only Rs. 31,59,698-6-9 were actually spent, and for a long period the unspent portion of this 47 lakhs went to swell the cash balance, though ultimately all spent upon the work. Again, in 1885-86 a drainage loan was raised, of which it was intended that Rs. 6,25,561 should be spent upon house-connections. Owing to uncertainties and difficulties, both engineering and other, this sum is only now being spent. It cannot by any stretch of imagination be argued that the increments to the cash balance which arose in these two cases were of the nature of a Sinking Fund. However careful the Municipal authorities may be not to raise loans in excess of their requirements at the time, it is inevitable (*vide* Accountant-General's para. 9) that when large loan works are in progress, there will be large cash balances, and to dub these balances (all in the end spent upon the work) as a Sinking Fund in order to apply special restrictions to the disposal of them, would be a travesty of common sense and plain English. Nor, I think, can the balance remaining unspent on a loan work after it is complete be regarded as or carried to Sinking Fund as the Accountant-General thinks should be the case. The requisite provision for Sinking Fund is made and advertised when the loan is raised, and such balances as those referred to are always taken as savings and carried to other works. If it were otherwise, no one would ever know till a work was complete what the Sinking Fund was really to be; it would depend on the savings on the work; and the terms of any given loan being therefore uncertain, the credit of the Municipality would be prejudicially affected in the money market.

9. With reference to the Accountant-General's para. 9, I must repeat what has already been stated over and over again that the Corporation have no quarrel with the Bank of Bombay on account of a "temporary" reduction or abolition of the interest formerly paid by them on Municipal deposits, rendered necessary by the abnormal cheapness of money. It is to be distinctly understood as between the Corporation and the Bank, that though in consequence of the congested state of the money market the latter took action sooner than perhaps it might otherwise have done, the action which it did take was not in pursuance of a casual or occasional, but of a fixed policy intended to govern all future procedure. I stated this most distinctly in my speech at the Corporation on 22nd August last, and I laid special stress upon the point, because the Hon'ble Mr. Forrest who presided at the meeting of shareholders of the Bank, which was held on 7th idem, in his speech at that meeting had held equivocal language on it.

Mr. Forrest said :—

"Carrying a balance of cash for some months of nearly five "crores of rupees, this Bank found it impossible to continue to

"pay interest on Port Trust and Municipal deposits * * * *
"Speaking for myself I hope the time will come when we can
"revert with profit to our former practice."

I sent this extract to the Secretary of the Bank, and on 18th August Mr. Sleigh wrote in answer to me as follows :—

"It has always been a principle of this Bank not to allow in-
"terest on current deposits, and the arrangement under which
"the Bank allowed interest on certain of the current deposits of
"the Municipality and the Port Trust, was exceptional, and was
"entered into on the grounds that the balances of these accounts
"partook in some measure of the nature of fixed deposits. As
"a matter of fact, however, the arrangement was a distinct de-
"parture from the Bank's rule, and my Directors now believe it
"wiser to adhere strictly to the principle for the future of not
"allowing interest on current deposits."

Nothing can be more idle than for any one to continue in the teeth of such a statement as this to contend that the policy of the Bank is dictated by the present state of the money market. The fact is the Bank possesses a monopoly, and is determined to make usè of it to the uttermost farthing. The legislature has handed over to the Bank for the profit and behoof of its shareholders the whole immense Municipal fund, and they naturally think of their own interests and not of those of the rate-payers. I may be allowed to make a quotation here from my speech at the meeting of the Corporation of 24th June last.

"In the course of conversation the other day between myself
"and a few leading merchants, it was asked of one of them, a gentle-
"man interested in the Bank of Bombay, 'Suppose the Municipality
"had 15, 16, or 18 lakhs of rupees to deposit with power to
"withdraw it, would you not be willing to pay them 2 %?'
"'Yes,' was the reply. 'Then why do you not do it now?' was
"next asked. 'Because we can get the money without' was the
"answer." (Laughter.)

It will add force to this illustration of the real state of affairs when I say that the gentleman who made this statement, a frank disclosure of the real fact, was a Director of the Bank of Bombay.

10. The Accountant-General's para. 14 does not require discussion.

He may or may not be correct in his views. The Corporation contains abundant commercial and financial ability to apply to similar speculations. But in considering the question of dealing with Government paper the Accountant-General has altogether missed the real point, which is not whether at the present moment an investment in it would be profitable or not, but whether a restrictive legal provision which compels the Municipality, in order to escape from a still worse alternative, to invest their balances in Government paper directly they receive them, it being borne in mind that the moment of realization must depend upon their money requirements and not upon the state of the market, is a profitable one to them or not. There can only be one answer to this question. It puts them at the mercy of the

occasion; it renders nugatory and futile all the judgment and knowledge of the Corporation and its officers; "last, high arbiter, chance, governs all."

11. In submitting these considerations to the Standing Committee, I have to add that before a sound conclusion can be come to on this most important question, the view must be extended beyond the circumstances of the present moment. If the Corporation could not now obtain from any Bank whatever better terms than the Bank of Bombay offer them (though I do not for a moment believe this to be true), that is to say, nothing at all, they would have to be content to suffer, as all other investors and depositors are suffering just at present. But this consideration has nothing whatever to do with the matter. What the Corporation object to is that at times when all other investors and depositors (I will not hamper the argument by a bye-reference to the unanalogous cases of local bodies in the Mofussil) can use their money to their own advantage, they are deprived of the opportunity of doing so, and the advantage is transferred to the shareholders of the Bank. I suppose it is inevitable that the change in the law which they solicit should be seriously canvassed, but I would very humbly venture to ask whether the Bombay Corporation are not as fit as the Calcutta Corporation, and scores of petty Corporations in Great Britain, to take care of their own money? If the suggested change is so very dangerous, how is it that it has never produced any serious results elsewhere?

12. In conclusion, I venture to say that Government are to be earnestly thanked for allowing the Corporation to criticize the criticisms of the Accountant-General, and I hope and think that their having done so is a good and happy augury.—I have, &c.,

H. A. ACWORTH,
Municipal Commissioner for the City of Bombay.

Proposed by George Cotton, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

No. 726. "That letter No. 29576, dated 19th March 1892, from the Commissioner, on the subject of the banking of Municipal funds, be forwarded to the Corporation with a recommendation that they reply in terms thereof to Government letter No. 472, General Department, dated 13th February last."

Carried.

Proposed by George Cotton, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

No. 727. "That, in the opinion of the Standing Committee, advantage should be taken of the opportunity of applying to Government for an amendment of the Municipal Act, to so alter chapter VI., as to enable the Corporation to raise money upon its own or other public securities which may be held by the Municipality."

Carried unanimously.

Considered again letter No. 641, dated 8th instant, from the Commissioner, requesting sanction to the purchase of 2,000 cases of kerosine oil, 150° proof test, Snowflake brand, at Rs. 3-14-0 per case, from Messrs. Heptoola Sheik Adam & Co. The cost to be met out of the current year's budget provision for kerosine lighting.

Read memorandum No. 1609, dated 25th instant, from the Commissioner, forwarding letter from Messrs. Heptoola Sheik Adam & Co., agreeing to supply the oil at Rs. 3-12-6 per case. Stating it is advisable to accept the offer, the lowest obtainable.

No. 728. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 1609, dated 25th instant, sanction be given to the purchase, from Messrs. Heptoola Sheik Adam & Co. of 2,000 cases of kerosine oil, 150° proof test, Snowflake brand, at Rs. 3-12-6 per case, each case weighing 65 lbs., and to be delivered at the Municipal Depôt at Grant Road. The cost to be met from the current year's grant for kerosine lighting.

"That under section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as enquiries have been made and it is found by the Commissioner that better rates cannot be obtained."

No. 729. *Resolved* : "That the following be *recorded*:—Letter No. 1238, dated 20th instant, from the Commissioner, reporting that he has entrusted the work of laying 1,200 feet of 9" water main in Nagdevi Street, 650 feet in Hamam Street, and 1,000 feet in Forbes Street, to Messrs. Bhedwar & Co. at rates at which they executed the work of laying mains in Nagdevi and other streets. The amount, about Rs. 1,857, to be met out of the loan of Rs. 1,00,000, raised for laying new mains in Nagdevi and other streets."

No. 730. *Resolved* : "That the following be *recorded*:—Letter No. 1323, dated 21st instant, from the Commissioner, reporting that he has sanctioned the purchase of models of enrichments in carving for the new Municipal Office, from the Principal, School of Art, as per list submitted. The cost, Rs. 2,271, to be met out of the contingencies, new Municipal Office grant."

No. 731. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 1455, dated 22nd instant, sanction be given to the acceptance by him of

the tender of Messrs. Spencer & Co., the only tender received, for the construction of a night-soil depôt at the north end of DeLisle Road. The cost, Rs. 16,023, *plus* Rs. 1,602 for 10 per cent. contingencies, to be met out of the grant for the work."

Proposed by George Cotton, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

No. 732. "That letter No. 1569, dated 25th instant, from the Commissioner, be *recorded*. That sanction be given to the Commissioner's entrusting the work of decorating and also of dismantling the Viceroy's and other platforms, of erecting fountain and other decoration works in connection with the Tansa Opening Ceremony, to Messrs. Richardson & Cruddas, at a total cost of Rs. 9,619-15-9. The cost to be met from the grant for the Tansa Opening Ceremony. That under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary as the works were urgent, as there was not sufficient time to call for tenders, and as the rates offered by Messrs. Richardson & Cruddas were fair and reasonable."

Carried.

No. 733. *Resolved*: "That the following be *recorded*:—Letter No. 1569, dated 25th April 1892, from the Commissioner, reporting that he has purchased a silver bell and a gold bracelet, at a cost of Rs. 900, from Messrs. Hamilton & Co., to the debit of the grant for the Tansa Opening Ceremony."

No. 734. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 1584, dated 25th instant, the Corporation be recommended to sanction the writing off of Rs. 316-4-9, which forms a portion of the outstandings on account of private works bills, as the different items aggregating the above amount have already, on the intimation of the Engineer's Department, been credited as revenue during the past two years under the heads of miscellaneous receipts and fees, and as the accounts of those years are closed, they cannot now be credited to private works, to which head they should have originally been credited."

No. 735. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 1467, dated 23rd instant, the Corporation be recommended to

sanction the writing off of Rs. 6,489, from the live-stock return of the Health Department, being the book-value of 34 bullocks that died and 69 which were sent to the Pinjrapol, total 103, during the quarter ending 29th February last."*

No. 736. *Resolved* : "That the following be forwarded for the decision of the Corporation with the recommendation that in either case the amount be met from the surplus cash balance :—Letter No. 1493, dated 23rd instant, from the Commissioner, stating, with reference to the resolution of the Committee No. 481, dated 13th idem, that a handsome casket with a suitable inscription (for presentation to Mr. Clerke) may be obtained for about Rs. 1,250. Suggesting that the Corporation be asked whether, in lieu of spending such a sum on such an object, they would not prefer to spend an equal amount on a service of silver plate with a suitable inscription which would both be useful and valuable, and, being always in use, would be a constantly present evidence of Mr. Clerke's great services and the munificent recognition of them by the Corporation."

No. 737. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 1248, dated 19th instant, sanction be given to the purchase of the following articles direct from the manufacturers, Messrs. Merrywether & Sons, of Longacre, London, *viz.*—(1) one steam fire engine at a cost of £546-19-6, or Rs. 7,880, the amount to be met out of the budget provision of Rs. 9,500, for the current year ; (2) five "curricle" manual fire engines at a cost of £538-15-0, or Rs. 7,760, the amount to be met out of the current year's budget provision for the same and the excess thereon of Rs. 260, to be met out of savings in the grant for the purchase of the steam fire engine as above ; (3) five 100 feet lengths of canvas delivery hose and ten London Brigade hand fire pumps at a cost of £35 and £31-5-0, or Rs. 504 and Rs. 450, respectively, the amount to be met out of their respective budget provision of Rs. 6,000 and Rs. 600; (4) three telescopic fire escapes from Messrs. Rose, Bray & Co., of London, at a

* Causes of death : 1 oedema of dewlap and throat ; 2 inflammation of heart, &c. ; 1 impaction of first stomach ; 10 old age and debility ; 10 rinderpest ; 1 dislocation of stifle joint ; 2 abscess in liver and cystic lungs ; 2 destroyed ; 1 inflammation of brain ; 1 enlargement of spleen, &c. ; 1 paralysis of limbs ; 1 flatulent colic ; 1 cancer of the horn ; total 34.

cost of £239-5-0, or Rs. 4,308, to be met from the current year's budget provision of Rs. 4,320, for the same.

"That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary as the rates of other firms who supply these articles are well-known and Merry-wether & Sons, pattern of engines are preferred for the purposes of the Bombay Fire Brigade."

No. 738. *Resolved* : "That, with reference to the Commissioner's memorandum No. 1471, dated 23rd instant, the Corporation be recommended to sanction the payment of Rs. 2,250, as an advance, from surplus cash balance, to be adjusted hereafter as a capital charge as may be recommended by the Standing Committee, for the cost of purchasing and fixing 1,000 boundary stones for the pipe lines extending from Kurla to Vehar and from Bandora to Tulsi."

No. 739. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 1242, dated this day, the Committee approve under section 91 of the Municipal Act III of 1888, of an application being made to Government for the acquisition, under the Land Acquisition Act, of 44·08 square yards of ground situated at Khetwadi, 10th Lane, required as the site for a dust-bin cart shown on plan marked A, dated this day, and filed in supplement to minute books. The cost to be met from the Road Improvement grant."

Proposed by the Hon'ble Mr. Fazulbhoy Visram, seconded by Javerilal U. Yajnik, Esq.—

No. 740. "That letter No. 804, dated 11th instant, from the Commissioner, be forwarded to the Corporation with the following recommendations :—

"(1.) That the provisions of clause 2 of the specification attached to the contract with Messrs. Macfarlane, Strang & Co., for the supply of iron mains and fittings for the Tansa Water Works be enforced. That the deductions due thereunder be made from the Contractor's final bill, *viz.*, £2,612-7-0 as the excess above the Schedule weight of pipes supplied by them, exceeded the contract allowance of 3 per cent. and amounted to 448 tons.

"(2.) The deduction of £12-15-0 on account of testing charges, incurred in replacing ironwork rejected under articles 12 and 17 of their contract.

"(3.) That sanction be given to the payment of £648-0-0 only to Messrs. Macfarlane, Strang & Co., in final settlement of all their claims, the amount to be met provisionally by a transfer from the balance of the sum of Rs. 1,00,000, provided in the revised estimate for the construction of valve-houses on siphon No. 6 and for other works in connection with the Tansa Duct."

Carried.

Read application from Mr. Enoch Solomon, who was lately dismissed from the Market Department, requesting the Committee, in consideration of his long service of thirteen years and of his having contributed to the Pension Fund, to allow him arrears of pay claimed by him, six months' notice to search for employment, twelve months' pay as gratuity, and a certificate of service.

No. 741. *Resolved* : "That Mr. Enoch Solomon be informed, in reply to his letter, dated 14th instant, that the Committee cannot entertain his application."

No. 742. *Resolved*: "That the following be forwarded to the Commissioner for favour of remarks, and that the applicants be informed accordingly :—Petition, dated 13th instant, addressed to the Corporation by Messrs. Dhondoo Mukoond, Vittoo Rumbajee and others, complaining of the enhanced license fee for the sale of hay."

No. 743. *Resolved* : "That the following be laid on the table :—Letter, dated 22nd instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of receipts and disbursements at the end of each week for the month of March last and compared them with the ledgers and journals and found them correct. Forwarding summary and statements of their scrutiny of accounts."

The following return was read and *recorded* :—

Return of fires at Chinchpokli Road (E. D. Sassoon Mill), Bapty Road and Colaba, forwarded with the Commissioner's memorandum No. 1195, dated 18th April 1892.*

The following statement† was laid on the table:—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 24th April 1892.

* *See* Appendix C. † *See* Appendix B.

Resolved : " That the Committee approve of the Commissioner's proposal to place before them weekly, up to the end of December next, report of any bursts that may occur on the line of the Tansa Duct."

No. 745.

It was agreed that Mr. G. Cotton be appointed to serve, *vice* Mr. Carroll, on the Sub-Committee, nominated by the Standing Committee on the 18th November 1891, to report on the question of laying new water mains.

No. 746.

BOMBAY, *4th May* 1892.

AT the meeting of the Standing Committee held this day, there were present :

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
BALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M. ; GEORGE COTTON, Esq. ; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; KAIKHOSRO N. KABRAJI. Esq. ; K. M. SHROFF, Esq. ; A. G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C. S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 27th ultimo, were signed.

The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Adamji Abdulali & Co., for the supply of petty stores during the year 1892-93 ; (2) with Messrs. Vishnu Narsingrao & Co., for works in connection with the construction of a pipe sewer and metal ventilating shafts along Government House Road, Parel, and Parel Village Main Road ; (3) with the Bombay Telephone Company, for working the Municipal telephones for a period of three years from 1st April 1892 ; (4) with Messrs. Adamji Abdulali & Co., for the supply of timber during 1892-93 ; (5) with Mr. Amrita Babaji, for the supply of road metal during 1892-93 ; (6) with Mr. Ramjanbhai Babanbhai, for the supply of carts and bullocks on hire during 1892-95; and (7) to deed of agreement between Mr. Moti Prema and the Corporation, securing to the Corporation the right to acquire at any future time the set back of property situated at No. 96-100, Pakmodia Street, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 25 per square yard for any land shown on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition.

No. 916.

Resolved: "That, as applied for by the Commissioner, in his memoranda Nos. 2056, 2057 and 2058, dated 30th ultimo, sanction be given under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

No. 917.

Name of owner.	Where.
Mr. Sakaram Markund ...	Building at Kandawadi Road.
„ Kanji Purbud ...	Do. at Girgam Back Road.
„ Bukridin Madarbux...	Do. at Ripon Road."

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 2404, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 918.

Read letter, dated 13th April 1892, from Mr. Walton, Executive Engineer, to the Commissioner, as follows :—

SIR,—I have the honor to request the favour of your sanction to an extension of six months' sick leave being granted to me at the expiration of my present leave on the 5th June next, and in support of this application I herewith forward a medical certificate from Sir W. Guyer Hunter, M.P., under whose medical advice I have been acting since my arrival in England.—I have, &c.,

RIENZI WALTON.

14*th April* 1892.

21, NORFOLK CRESCENT,

HYDE PARK, W.

Rienzi Walton, Esq., Executive Engineer, Bombay Municipality, has not yet sufficiently recovered his health to enable him to return to his duties, and I am of opinion that an extension of his leave for six months is necessary.

W. GUYER HUNTER, M.D.

No. 2270 OF 1892-93.

3*rd May* 1892.

Forwarded to the Standing Committee for favour of sanction. Mr. Walton is entitled to the leave applied for.

H. A. ACWORTH, Commissioner.

Resolved: "That, as recommended by the Commissioner, in his memorandum No. 2270, dated 3rd instant, sanction be given to six months' extension of sick leave to Mr. Walton, Executive Engineer, from the date of the expiry of his present leave, *viz.*, 5th June 1892."

No. 919.

Resolved : "That the following be *recorded* :—Letter
No. 920. No. 1994, dated 29th ultimo, from the Commissioner, reporting that he has sold the right of removing mangoes this season from the Elphinstone Circle and Bazaar Gate Gardens to one Cursonji Morarji for Rs. 11.*"

Resolved : "That, as applied for by the Commissioner,
No. 921. in his letter No. 2089, dated 30th ultimo, sanction be given to the purchase of 1,000 tons of Davison's West Hartley coal from Messrs. Killick Nixon & Co., at the rate of Rs. 18-8-0 per ton, delivered at the Love Grove Pumping station.

"2. That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as similar arrangements sanctioned by the Committee's resolution No. 9755, dated 7th January 1891, for the purchase of coal during the current year have been advantageous to the Municipality."

Resolved : "That, as applied for by the Commissioner,
No. 922. in his letter No. 1995, dated 29th ultimo, and in lieu of the Committee's resolution No. 7202, dated 22nd October 1890 (sanctioning the stallage fees of Rs. 25 and 41 per quarter in respect of stalls Nos. 58 and 28, Erskine Road, new Fruit and Vegetable and Arthur Crawford Beef Markets), sanction be now given to the right of occupancy of these stalls being sold by public auction for Rs. 22 and 24 per quarter respectively.

"That sanction be likewise given for the right of occupancy of stall No. 50A† in the Arthur Crawford Beef Market being sold for the unexpired portion of the current quarter for Rs. 24."

Resolved : "That the following be *recorded* :—Letter
No. 923. No. 1906, dated 28th ultimo, from the Commissioner, reporting that he entrusted the work of erecting and decorating mandvas, the hiring of chairs, &c., in connection with the Tansa opening ceremony, to Messrs. Khakibhoy Padamsey & Co., at a total cost of Rs. 1,495-13-8, to be met out of the grant for the opening ceremony."

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* Last year the sale realized Rs. 20.

† The sanctioned rent is Rs. 41 per quarter.

Resolved : "That, as applied for by the Commissioner, in his letter No. 2001, dated 29th ultimo, sanction be given to the purchase from Messrs. Richardson & Cruddas of certain iron work for the Tansa water mains at a cost of Rs. 396-15-2."

No. 924.

Resolved : "That, as applied for by the Commissioner, in his letter No. 2189, dated 2nd instant, sanction be given, under section 172 of the Municipal Act, to a special charge of Rs. 92-5-9 being made against Government in the Military Department for halalkhor service rendered to a squadron of the 2nd Bombay Lancers encamped near the Wodehouse Bridge from 29th March to 6th April last, both days inclusive."

No. 925.

Proposed by K. M. Shroff, Esq., seconded by Javerilal U. Yajnik, Esq.—

"That, as applied for by the Commissioner, in his letter No. 265, dated 4th ultimo, sanction be given, under section 216 of the Municipal Act, to the writing off of Rs. 1,902-10-1, the amount of irrecoverable bills for water, halalkhor, general and wheel tax, as per list submitted, and that the Municipal Commissioner be requested to draw the attention of the Assessment Department to the desirability of presenting the wheel tax bills, especially, in time."

No. 926.

Carried.

Read letter No. 2082, dated 30th ultimo, from the Commissioner, to the Secretary, as under:—

SIR,—When the new pumping engines are erected at Love Grove, it will be necessary, in order to comply with the provisions of the Bombay Boiler Inspection Act, as well as for the proper management of the engines and pumps, to have there two first class certificated Engineers. The New Works Budget contains a provision of Rs. 6,875 for the quarters of one Engineer at Love Grove. I have directed the Executive Engineer to prepare plans and estimate for a building sufficient to accommodate both men, and I submit them herewith. The estimate amounts to Rs. 12,009, which renders a further provision of Rs. 5,134 necessary. This might be met out of surplus cash balance; but I am very reluctant to apply at present for any grants beyond the budget allotment, and I beg to suggest that the excess be met by a transfer from the provision

of Rs. 12,550 in the New Works Budget for new roads in the Victoria Gardens. The land added to the Gardens will be filled in and laid out this year, and a portion of the roads may be deferred till next year. With regard to the additional Engineer who is, or rather will be, needed at Love Grove, I shall, of course, come in due time to the Standing Committee and Corporation for sanction to the appointment; but I believe it will be possible so to re-arrange establishments that no extra expense will be thereby incurred by the Corporation.—I have, &c., H. A. ACWORTH, Commissioner.

Proposed by Grattan Geary, Esq., seconded by Hurkisondas Narrotumdas, Esq.—

"That letter No. 2082, dated 30th ultimo, from the Commissioner, be forwarded to the Corporation.

No. 927. 2. That the Corporation be recommended to sanction the grant of Rs. 5,134, being the amount necessary to provide quarters for an additional Engineer required for the proper management of the new engines and pumps when erected at Love Grove Pumping Station. The amount to be met by a transfer from the provision of Rs. 12,550 in the budget for new roads, Victoria Gardens."

Carried.

Considered the following:—

BOMBAY, 31*st March* 1892.

To THE COMMISSIONER.

SIR,—With reference to your No. 20139, dated the 1st of December 1891 (herewith returned), we have the honor to forward copy of the case submitted to Counsel (Mr. Jardine) on the question of the effect of section 521 of the Municipal Act, and copy of his opinion thereon, from which it would appear that an amendment of the Act will be desirable.—We have, &c., CRAWFORD, BURDER & Co.

No. 262 OF 1892-93. *4th April* 1892.

Copy forwarded to the Standing Committee with reference to their Resolution No. 9314 of the 25th November 1891.

H. A. ACWORTH, Commissioner.

Ex-parte.

The MUNICIPALITY.

Re-Question whether, and how far, Municipal officers and servants are "public servants" under the Indian Penal Code?

CASE.

Section 521 of the City of Bombay Municipal Act, 1888, provides that "the Commissioner and Deputy Commissioner and every Councillor and every Municipal officer or servant appointed under this Act, and every Contractor or Agent for the collection of any Municipal tax, and every servant or other person employed by any such Contractor or Agent, shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code."

Section 528 enacts that "the provisions contained in Schedule R for regulating the constitution of the Corporation and other matters until this Act is brought fully into operation shall be of the same effect as if they were enacted in the body of this Act."

Schedule R (section 6) provides that the "Commissioner and the Deputy Commissioner, if any, and all Municipal officers and servants holding office on the day before this Act comes into force, shall be deemed to have been appointed under this Act, and until an order to the contrary is passed by competent authority under this Act, shall continue to hold respectively the same or the corresponding offices under this Act and to receive the same emoluments."

Sections 74 to 78 inclusive provide for the appointment of the Executive Engineer, the Executive Health Officer, the Municipal Secretary, the clerks and servants to be immediately subordinate to the Municipal Secretary.

Section 79 is as follows:—"(1) The Commissioner shall, as soon as may be after this Act comes into force and afterwards from time to time, prepare and bring before the Standing Committee a schedule setting forth the designations and grades of the other officers and servants who should, in his opinion, be maintained, and the amount and nature of the salaries, fees and allowances which he proposes should be paid to each.

"(2). The Standing Committee shall sanction such schedule either as it stands or subject to such modifications as they deem expedient. Provided that no new office, of which the aggregate emoluments exceed Rs. 200 per month, shall be created without the sanction of the Corporation."

In accordance with the last mentioned section the Commissioner has, since the Act came into operation, prepared the schedule therein contemplated, and such schedule has been duly sanctioned by the Standing Committee.

Prior to the Act coming into operation, one Enoch Solomon was employed as a Sub-Inspector of Markets and Slaughter Houses, and subsequently thereto he continued to be so employed, his appoint-

ment being included in the schedule submitted to the Standing Committee as aforesaid under section 79 of the Act.

A charge was recently brought against Enoch Solomon under section 161 of the Penal Code for receiving an illegal gratification, and Counsel for the defence contended that the accused was not a public servant :—

(1) because he was employed before the present Municipal Act came into force, and the Act only applied to Municipal officers and servants appointed under the Act and after it came into force ; and (2) because a Sub-Inspector of Municipal Markets does not fall within either of the descriptions of persons specified in section 21 of the Indian Penal Code, and consequently to read the Indian Penal Code (when treating of public servants) as including Municipal officers and servants generally and amongst them such a Sub-Inspector would amount to extending by virtue of a Local Act the scope of an Act of the Imperial Government.

Section 137 of the Indian Railways Act IX of 1890 provides that every Railway servant shall be deemed to be a public servant for the purposes of Chapter IX of the Indian Penal Code.

Section 79 of the Bombay Port Trust Act VI of 1879 enacts that "any person employed under this Act, not being a public servant within the meaning of section 21 of the Indian Penal Code, who shall accept or obtain or agree to accept or attempt to obtain from any person, for himself or for any other person, any gratification whatever, other than legal remuneration as a reward for doing, or forbearing to do any official act, or for showing or forbearing to show in the exercise of his official functions favor or disfavor to any person, or for rendering or attempting to render any service or disservice to any person with the Board or with any public servant as such or with the Government, shall be liable to the same punishment as is provided by the Indian Penal Code in the case of the like offence committed by a public servant."

It was argued upon the strength of the language of this last mentioned Act that, in the absence of similar provision in section 521 of the Municipal Act, the accused could not possibly, for the purposes of a prosecution under section 161 of the Indian Penal Code, be held to be a public servant, and in further support of such argument the illustration to clause 10 of section 21 of the Indian Penal Code was pointed to as showing that certain Municipal officers, whose duties came clearly within those described, would be held to fall within the meaning of section 21 ; but that other Municipal officers or servants whose duties did not come within the terms of those described, could not be held to be public servants.

Counsel is requested to advise :—

1. The section 521 refers to Municipal officers and servants appointed under the Act, schedule R, section 6, which is of same effect as of the body of the Act says, that all Municipal officers and servants holding office on the day before the Act came into force shall be deemed to have been appointed thereunder. I am accordingly of opinion that section 521 applies to officers and servants employed as such before and continued in such employment after the Act came into operation.

(1). Whether the provisions of section 521 of the Municipal Act apply to or include Municipal officers and servants employed as such before and continued in such employment after the Act came in force, or only those appointed since the Act came into operation ?

2. I think section 21 of the Indian Penal Code must be looked to alone for the definition of public servant, and that a Municipal officer is not liable to prosecution as such unless he comes within the definition therein contained. I do not think that the provisions of section 21, Indian Penal Code, can be extended by section 521, Bombay Municipal Act.

(2). What is the precise legal effect of section 521 as regards those Municipal officers to whom it does apply. Are they amenable to prosecution in respect of offences by public servants under the Indian Penal Code, irrespective of whether their duties fall within either of the descriptions set out in section 21 of the Code?

3. I should say that a section similar to section 137* of the Port Trust Act would be a desirable substitute for section 521, Bombay Municipal Act.

(Sd.) JAMES JARDINE.
30*th March* 1892.

(3). Is it advisable or necessary to amend the Municipal Act in order to render Municipal servants amenable to prosecution in respect of offences by public servants as defined in the Indian Penal Code ; and if so, should the amendment be by substituting for section 521—a section similar to section 137* of the Port Trust Act—or in what other way ?

And to advise generally.

Resolved: "That the following be forwarded to the Corporation :—Memorandum No. 262, dated 4th ultimo, from the Commissioner, forwarding Counsel's opinion on the question of the effect of section 521 of the Municipal Act.

No. 928.

* This should be section 79 and not section 137.—(H. W. B.)

2. That the Corporation be recommended to apply to Government to amend the Municipal Act by substituting for section 521 thereof a section similar to section 79 of the Port Trust Act VI of 1879,* in order to render Municipal servants amenable to prosecutions in respect of offences by public servants as defined in the Indian Penal Code."

Resolved : "That the following be *recorded* :—Memo-
No. 929. randum No. 1858, dated 28th ultimo, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 24th idem."

Resolved : "That the following be *recorded* :—Memo-
No. 930. randum No. 1764, dated 27th ultimo, from the Commissioner, reporting that no houses or portions of houses fell during the month of February last."

Considered the following letter No. 267, dated 26th April 1892, to the Commissioner :—

SIR,—I have the honor to forward for transmission to the Standing Committee a return of the receipts and disbursements of the Bombay Municipality for the quarter ending 31st March 1892, as compared with the corresponding quarter for the previous year, as required by the then Town Council's Resolution No. 465, of 1st June 1887, with a list of additional grants sanctioned by the Corporation during the quarter.

2. The unappropriated surplus cash balance, as pointed out in my report No. 1617, dated the 20th August 1891, on the accounts for the year 1890-91, is Rs. 5,00,000, the whole of which has already been appropriated in the current year's budget, reserving Rs. 1,46,907 for additional grants to be sanctioned during the past year.

3. The extra grants sanctioned up to the end of the past quarter, *viz.*, 31st March 1892, aggregate Rs. 98,074-0-11. Thus the unappropriated balance of the above reserve of Rs. 1,46,907 amounts to Rs. 48,832-15-1.

4. The revenue of the past year, notwithstanding the falling off of about Rs. 60,000 in Town duties, has been on the whole about

* Any person employed under this Act, not being a public servant within the meaning of section 21 of the Indian Penal Code, who shall accept or obtain or agree to accept, or attempt to obtain from any person, for himself or for any other person, any gratification whatever, other than legal remuneration as a reward for doing or forbearing to do any official act, or for showing or forbearing to show in the exercise of his official functions favour or disfavour to any person, or for rendering or attempting to render any service or dis-service to any person with the Board (Corporation), or with any public servant as such or with the Government, shall be liable to the same punishment as is provided by the Indian Penal Code in the case of the like offence committed by a public servant.

Rs. 2 lakhs in excess of the estimates, of which Rs. 1,67,517 on account of increased tax on Government buildings from the year 1889-90, have already been appropriated in the budget for 1892-93. There have also been large savings in expenditure, of which about 1½ lakh were anticipated at the time of framing the current year's budget and consequently were appropriated in that budget. Excluding these appropriations of over 3 lakhs in the current year's budget on account of surplus revenue and savings in expenditure during the past year, there would remain a further unappropriated surplus of about two lakhs of Rupees on account of 1891-92.

5. The exact amount of that surplus, however, cannot be correctly stated until the accounts of the past year are finally closed.— I have, &c., SORABJI NAOROJI COOPER, Chief Accountant.

Additional Grants sanctioned by the Corporation during the Quarter ending 31st March 1892.

Corporation Resolution No.	Date.	Nature of work.	Amount.
	1892.		Rs. a. p.
12557	February 8 ...	Grant of Rs. 3,536 from surplus cash balance to meet the cost of repairs to the Victoria and Albert Museum	3,536 0 0
12558	„ 8 ...	Grant of Rs. 4,870-1-7 from surplus cash balance to meet the amount of property taxes payable in respect of the present Municipal Offices	4,870 1 7
12735	„ 11 ...	Grant of Rs. 100 from surplus cash balance, being the amount claimed by Messrs. Khimji Colah & Co., as balance due to them on account of 38 candies of babool wood slabs supplied to the Municipality in February 1891...	100 0 0
12738	„ 11 ...	Grant of Rs. 7,500 from surplus cash balance to meet a further excess in the Budget Grant for commission payable to the Port Trust and the two Railway Companies for the collection of Town Duties	7,500 0 0
12748	„ 11 ...	Grant of Rs. 600 from surplus cash balance to meet the cost of engrossing on vellum and of binding the address of condolence to Her Majesty the Queen-Empress on the death of H. R. H. the Duke of Clarence and Avondale, and of telegraphing the purport of the address	600 0 0
12752	„ 11 ...	Grant of Rs. 25 per mensem from surplus cash balance as house-rent to Mr. Ginger, the Head keeper, Victoria Gardens	25 0 0
13768	March 7 ...	Grant of Rs. 328 from surplus cash balance to meet the cost of certain alterations in the Paidhoni Police Station...	328 0 0
		Total Rs....	16,959 1 7

ACCOUNT OF THE BOMBAY MUNICIPALITY

as contrasted with that for the Quarter

	Budget Estimate.	Quarter ending 31st March 1891.	Quarter ending 31st March 1892.
RECEIPTS.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Opening Balance	4,30,000 0 0	47,075 5 9	48,328 9 7
General Tax	17,38,800 0 0	3,27,563 3 6	5,33,735 2 4
Water Works Revenue (including Water Tax) ...	12,20,760 0 0	3,29,835 5 0	3,55,887 1 10
Wheel Tax and Tolls ...	3,09,700 0 0	1,61,793 2 6	1,74,678 13 9
Halalkhor Tax	5,48,000 0 0	1,36,673 6 1	1,34,677 12 8
Duties, Town...	9,00,000 0 0	3,66,574 5 9	2,49,837 5 1
Licenses	63,750 0 0	20,542 12 0	23,873 12 0
Receipts from Govt. for Liquor Licenses.	1,43,750 0 0	.....	.....
„ for Tobacco Duty.	1,67,800 0 0	58,928 15 9	61,791 0 0
Market Receipts	3,47,380 0 0	95,436 5 8	92,667 11 2
Miscellaneous Fees	45,400 0 0	9,602 9 7	12,883 9 4
„ Fines and Penalties...	7,000 0 0	2,006 10 7	4,489 5 1
„ Receipts ...	1,01,135 0 0	42,636 11 9	37,653 6 9
„ Savings ...	3,000 0 0	3,709 14 5	.....
Public Gardens	6,000 0 0	3,293 7 1	2,301 9 10
Contribution from Municipal servants towards Pension, &c., Fund	14,000 0 0	3,652 9 8	3,986 6 6
Tramway Rent	36,200 0 0	.....	.....
Workshops Recoveries ...	1,40,000 0 0	78,308 0 11	30,863 10 10
Interest and profit on Investments	1,17,000 0 0	72,040 15 4	1,26,418 9 3
	59,09,675 0 0	17,12,598 7 7	18,45,745 4 5
Debt	.....	47,000 0 0	33,04,000 0 0
Bank of Bombay Loan and other Deposit Accounts ...	....	14,03,766 7 7	18,78,544 6 5
Advances	.....	4,35,085 9 11	3,92,659 2 4
Deposits	.....	2,35,854 7 6	2,06,170 4 9
Rupees ...	59,09,675 0 0	38,34,305 0 7	76,27,119 1 11
Total Rupees...	63,39,675 0 0	38,81,380 6 4	76,75,447 11 6

FOR THE QUARTER ENDING 31ST MARCH 1892, ending 31ST MARCH 1891.

	Budget Estimate.	Quarter ending 31st March 1891.	Quarter ending 31st March 1892.
DISBURSEMENTS	Rs. a. p.	Rs. a. p.	Rs. a. p.
Superintendence	1,81,676 0 0	48,176 12 5	49,043 4 4
Assessment and Collection Department	2,30,480 0 0	71,444 9 4	72,192 2 5
Fire Brigade...	1,44,800 0 0	29,059 15 7	20,586 7 6
Public Gardens	80,739 0 0	29,673 15 2	34,169 9 10
Public Works. General Supervision Estt.(including Workshops)...	1,80,708 0 0	94,262 0 8	38,448 7 0
Public Works. Drainage	1,83,141 0 0	91,862 0 1	43,599 4 8
Public Works. Water Works	2,08,642 0 0	*3,75,838 12 2	*7,96,311 2 3
Public Works. Streets and Buildings Inspection and Supervision Estt.	85,278 0 0	22,347 10 8	21,447 6 10
Public Works. Public Lighting ...	3,69,715 0 0	79,257 15 4	75,462 10 8
Public Works. Road Watering... ...	93,270 0 0	37,183 9 2	35,369 15 9
Public Works. Road Repairs and Maintenance...	4,65,872 0 0	1,55,141 5 11	1,45,076 0 0
Public Works. Street Improvements ...	1,05,030 0 0	37,082 6 4	42,023 4 4
Public Works. Cleaning, Lighting and Repairing Port Trust Wharves	37,642 0 0	.....	.....
Health Department... ...	14,26,279 0 0	2,96,702 5 2	4,09,959 13 5
Miscellaneous (including Contributions to Hospitals, &c.)	1,45,608 0 0	37,086 2 4	51,253 6 9
Police Charges	2,58,289 0 0	64,571 5 9	64,571 5 9
Education (including Veterinary College, &c.) ...	83,680 0 0	15,806 14 4	20,928 14 4
New Works and Reserve Funds	69,270 0 0	1,02,814 15 3	1,69,299 3 2
Debt	18,08,252 0 0	4,57,796 2 8	5,28,272 15 11
	61,58,371 0 0	20,46,108 14 4	26,18,015 6 11
Bank of Bombay Loan and other Deposit Accounts ...	.....	8,47,647 5 0	41,43,421 11 3
Loan Works Accounts ...	.....	1,47,603 15 2	3,30,809 14 1
Advances	.....	3,57,251 3 1	1,85,150 5 1
Deposits	.....	1,52,611 5 2	2,14,446 8 9
Rupees...	61,58,371 0 0	35,51,222 10 9	74,91,843 14 1
Closing Balance 1891 ...	.....	3,30,157 11 7	1,83,603 13 5
Estimated Balance on 31st March 1892...	1,81,304 0 0	.....	.....
Total Rupees...	63,39,675 0 0	38,81,380 6 4	76,75,447 11 6

* Includes a net sum of Rs. 3,21,596-0-2 and Rs. 7,43,596-14-8 respectively paid to date on account of Tansa and other Water Works executed out of Loan Funds and Investment of Surplus Tansa Loan and Interest Funds.

Memorandum No. 1861, dated 28th April 1892, as under :—
Forwarded to the Standing Committee for information.
H. A. ACWORTH, Commissioner.

Resolved: "That the following be *recorded* :—Memo-
No. 931. randum No. 1861, dated 28th ultimo, from the Commissioner, forwarding a return of the receipts and disbursements for the quarter ending 31st March 1892, as compared with the corresponding quarter of the previous year, together with a list of additional grants sanctioned by the Corporation during the quarter. Also letter No. 267, dated 26th of the same, from the Chief Accountant."

Resolved: "That the following be forwarded to the
No. 932. Commissioner for remarks and that the applicants be informed accordingly:—Memorandum from the Municipal Secretary, forwarding petition, dated 28th ultimo, addressed to the Corporation by Messrs. E. D. Sassoon & Co. and others, stating that the Argyle Main Road and its streets, roads and the foot-paths thereof are very badly in want of repairs."

Resolved: "That the following be forwarded to the Com-
No. 933. missioner in continuation of the Committee's resolution No. 14008, dated 16th March last. Further letter from the residents of Kumbharwada Street, Lower Mahim, inviting attention to their former communication regarding the want of a water fountain in that locality."

The following return was read and *recorded* :—

Return of fires at Fergusson Road (Warli), Dharavi Road (Mahim), Breach Candy Road (Mahalakshmi) and Ripon Road (Hindustan Mill), forwarded with the Commissioner's memorandum No. 2188, dated 2nd May 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 1st May 1892.

Resolved: "That, as applied for by the Commissioner,
No. 935. in his letter No. 2406, dated this day, sanction be given to the acceptance by him of the tender of Messrs. Pallonji Shapurji Mistri & Co., the lowest of 3 tenders received, for the following works :—

(*a*) Alteration of Engine House, Malabar Hill Reservoir, so as to provide quarters for the Inspector.

* See Appendix C. † See Appendix B.

(*b*) Chowki for watchmen and other minor improvements at Bhandarwada Reservoir.

(*c*) Fencing new ground at Chinchpogli and the western boundary of old ground.

(*d*) Latrines and urinals for workmen at Chinchpogli Stores.

The amount of the tender, *viz.*, Rs. 7,274-11-7, to be met out of the budget grant of Rs. 7,530 for new works in the current year's budget."

No. 936. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 2378, dated this day, the Committee approve, under section 381 of the Municipal Act, of a notice in writing being served upon Messrs. Dhoola Cutchra & Co., requiring them to fill in the low-lying ground belonging to them at Gilder Street with sweet earth to the level of the public road."

No. 937. *Resolved* : "That intending purchasers of the Worthington's pumps and the machinery at Pawai Water Works be informed that the cost of the same was about Rs. 64,000, that the machinery was only worked for about five months and is in excellent condition, but that the Corporation are prepared to receive offers for the purchase."

No. 938. In reference to the Committee's Resolution No. 8363, dated 4th November 1891, the Commissioner informed the meeting that Mr. Abdul Huc has refused to accept the offer of Rs. 30 per square yard for the 276¼ yards of ground taken up from him for the improvement of Bruce Lane and demands about Rs. 135 per square yard for a portion of the said land.

The Committee decided that no increase on the 30 rupees per yard should be made.

BOMBAY, 11*th May* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.I.M.C., *Chairman*.
BHALCHANDRA K. BHATWADEKAR, Esq., L.M. ; GEORGE COTTON, Esq.; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq.; K. M. SHROFF, Esq. ; A. G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 4th instant, were signed.

No. 1213. *Resolved* : " That in lieu of the resolution of the Committee, No. 487, dated 13th ultimo, sanctioning a contract being entered into with Mr. E. Wimbridge, of the East India Art Manufacturing Company, for the supply of furniture for the new Municipal Office at schedule rates, amounting to Rs. 91,292-8-0, sanction be now given to such contract being entered into in the names of Messrs. E. Wimbridge and Hormusji Shapurji Servai."

No. 1214. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Heptoola Sheik Adam & Co., for the supply of hardware during the year 1892-93 ; (2) with Messrs. Heptoola Sheik Adam & Co., for the supply of one thousand casks of Portland cement ; and (3) with Messrs. Edward Wimbridge and Hormusji Shapurji Servai, for the supply of furniture for the new Municipal Office.

The seal was also affixed to 21 attested duplicate debentures of the Sanitary Works Loan of 1885, of Rs. 500 each, Nos. 76, 788, 1703, 2115/22, 2391/4, 2567, 2341/3, and 3116/17 N N.

No. 1215. *Resolved* : " That, as applied for by the Commissioner, in his memoranda Nos. 2471 and 2472, dated 5th instant, and Nos. 2604, 2605, and 2606, dated 7th idem, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Babaji Shimpi	Building at Khetwadi Back Road.
„ Ebrahimbhoy Karimbhoy.	Do. at do. do.
„ Ladak Nathoo	Do. at Gunpowder Road.
„ Noorbhoy Moosajee ...	Do. at Duncan Road.
„ Hariba Havildar... ...	Do. at Khetwadi Back Road."

No. 1216. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 2868, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 1217. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 2665, dated 9th instant, and under the Pension Rules, sanction be given to the payment of a compassionate allowance not exceeding Rs. 213-11-0, to the widow of the late Mr. Hurdevram Narbheram, Ward Clerk, Assessment Department, a con-

tributor to the Municipal Pension Fund. The amount to be met from the grant for pensions and gratuities for the current year."

No. 1218. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 2607, dated 7th instant, and in lieu of the resolution of the Town Council No. 2065, dated 9th October 1882, sanctioning the payment to Mr. Ramaya Luxomon of compensation at the rate of Rs. 5 per square yard, for the 2·64 square yards, or thereabout, of ground acquired at Kamathipura 14th Street, sanction be now given to the payment of such compensation, to Bai Maneckbai, widow of Mr. Narotum Ramjee, and to Mr. Purshotum Narotum."

No. 1219. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 2632, dated 7th instant, sanction be given to Registration Clerk A. DeMello and Ward Clerk Hazi Abdool Razak, of the Assessment Department, being allowed to contribute to the Pension Fund, from 26th November and 4th August 1891, respectively."

No. 1220. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 2639, dated 7th instant, and in lieu of the resolution of the Committee, No. 7202, dated 22nd October 1890, sanctioning the stallage fee of Rs. 20 per quarter, for stall No. 64, Erskine Road Mutton Market, sanction be now given to the right of occupancy of the said stall being sold for Rs. 17 per quarter."

No. 1221. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 2666, dated 9th instant, the Committee approve, under section 381 of the Municipal Act, of a notice in writing being served on Mr. Noor Mahomed bin Sajanbhoy, requiring him to close or cover up the well belonging to him in Peroo Lane, as the well is in an unprotected condition and is therefore dangerous to the children of the neighbourhood and to passers-by."

No. 1222. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 2667, dated 9th instant, the Committee approve, under section 381 of the Municipal Act, of a notice in writing being served on Mr. Eduljee Bazonjee Lackdawalla, agent for Mr. Shapurjee Nanabhoy Arda, requiring him to raise, level and properly slope the low-lying ground at No. 69, Sonapur Lane, by filling in the same with sweet earth."

Resolved : "That the following be *recorded* :—Memoran-
No. 1223. dum No. 2375, dated 4th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 30th ultimo."

Resolved : "That the Corporation be recommended to
No. 1224. inform Mr. Dhondoo Mukoond and others, in reply to their petition, dated 13th April last, that the present fees for the storage of hay were fixed after careful consideration and are not excessive, considering that the trade in hay involve most serious elements of danger and because the old scale of license fees was too trivial to enable the Municipality to exercise any real control over the trade."

It was agreed that the resolution of the Corporation, No. 1023, dated 5th instant, regarding memorial tablets in connection with the Tansa Water Works be put on the list of outstanding business.

Resolved : "That the following be *recorded* :—Memo-
No. 1225. randum No. 2376, dated 4th instant, from the Commissioner, reporting, with reference to the resolution of the Committee No. 5620, dated 9th January 1889, the transfer of Rs. 5,000 (5 per cent. Municipal Debentures) from the surplus cash deposit account to the Municipal Loan Sinking Fund deposit account, on 27th ultimo."*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 8th May 1892.

With reference to the resolution of the Committee,
No. 1226. No. 9855, dated 9th December last, the Secretary handed in for distribution to the Councillors 12 copies, received from the Commissioner, of the alphabetical list of Municipal and private roads.

Resolved : "That the following be *recorded*:—Memo-
No. 1227. randum No. 2752, dated 10th instant, from the Commissioner, reporting that there was a burst on the 48″ Tansa main on the evening of the 6th idem near the kutchra ground at Kurla which was repaired on the next day."

* The balance standing to the credit of the surplus cash deposit account after effecting the above transfer amounts to Rs. 21,21,835-10-4 (Rs. 18,07,000 in Municipal Debentures and Rs. 3,14,835-10-4 in cash).

† *See* Appendix B.

Read the following :—

No. 3606. Bombay, 7th May 1892.

To THE COMMISSIONER.

SIR,—I have the honour to forward the following results of examination of the Tulsi, Vehar and Tansa waters for submission to the Standing Committee for the current month.

Sample of unfiltered Tulsi water obtained from the inlet well, Malabar Hill Reservoir, on the 30th April 1892.

	Parts per million.
Free Ammonia	·10
Albumenoid Ammonia	·14

Sample of filtered Tulsi water obtained from the distributing Tank, Malabar Hill Reservoir, on the 30th April 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·09

Sample of unfiltered Vehar water obtained from the settling basin of the Bhandarwada Hill Reservoir, on the 2nd May 1892.

	Parts per million.
Free Ammonia	·04
Albumenoid Ammonia	·16

Sample of Tansa water taken from an hydrant on the 27″ main in Arthur Road, on the 30th April 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·12

I have, &c.,
T. S. WEIR, Health Officer.

No. 2764 of 1892-93, 10th May 1892.

Forwarded to the Standing Committee for information.

H. A. ACWORTH, Commissioner.

No. 1228. *Resolved*: "That memorandum No. 2764, dated 10th instant, from the Commissioner, forwarding analyses of water made by the Health Officer, be *recorded*."

No. 1229. *Resolved*: "That the following be forwarded to the Commissioner for favour of report :— Petitions, dated 10th instant, from Haji Mookerderdin Lal Mohomed, Messrs. P. M. Nicholson, S. P. Gadawalla, Maneckjee Jamsetjee Mistri and others, complaining that they have been prevented by the Police from selling boots and shoes on the footpaths in the vicinity of the Crawford Market."

No. 1230. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 2819, dated 10th instant, the Corporation be recommended to sanction the

writing off of Rs. 59-4-3, on account of irrecoverable private works bills, Water Works Department, as per statement attached to the letter."

Read letter No. 2840, dated 10th instant, from the Commissioner to the Secretary, as under :—

SIR,—I have the honour to state that the large gun metal bush of the Carnac Bunder night-soil pumping engine is considerably worn out, leaving a space of $\frac{5}{8}$" between the bush and the piston, and it is absolutely necessary to provide a new bush as well as a new rod with lever for the ram so as to ensure the safe working of the engine. The cost of replacement and repair will be Rs. 1,418-1-5.

As there is no provision for this work, and as it is important, I have the honour to request the sanction of the Standing Committee and Corporation to the cost being met out of surplus cash balance. The state of the surplus cash balance is as under* :—I have, &c., H. A. ACWORTH, Commissioner.

No. 1231. *Resolved* : " That letter No. 2840, dated 10th instant, from the Commissioner, be forwarded to the Corporation.

" That the Corporation be recommended to sanction the payment of Rs. 1,418-1-5, from surplus cash balance,* to meet the cost of providing a new gun metal bush or lining for the Carnac Bunder night-soil pumping engine, as the existing one is considerably worn out, and it is absolutely necessary to provide a new bush and a new rod and lever for the ram to ensure the safe working of the engine."

No. 1232. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 2809, dated 10th instant, the Committee approve, under section 91 of the Municipal Act, of an application being made to Government for the acquisition, under the Land Acquisition Act X of 1870, of two plots of land, each of about 1,000 square feet, owned by Mr. Janardhan Purshotamji and Mr. Purshotam Mahowji, situated at Warli, as shown on plan marked A, dated this day, and filed in supplement to minute books, such ground being required for the purpose of providing latrine accommodation.

No. 1233. *Resolved* : " That, in continuation of the Committee's resolution No. 12656, dated 4th March 1891, and as applied for by the Commissioner, in

* The state of the surplus cash balance is as follows :—
Reserved for probable extra grant up to the end of 1891-92 Rs. 79,703 ; amount of grants already sanctioned (excluding temporary advances to be adjusted hereafter) Rs. 32,707-11-0 ; amount recommended for sanction Rs. 2,306 ; amount available Rs. 44,689-2-0.

his letter No. 2888, dated 11th instant, sanction be given to the variation of the terms of the contract with Messrs. Bulkley & Co., the Contractors for the Queen's Road and Girgam districts sewerage works so as to admit of the supply to them, from 3rd November 1890 to 4th March 1891, of 4″ stoneware pipes when supplied on requisitions instead of 2′ and 2′-6″ lengths at annas seven and pies three per running foot of 3′ pipes (cost price), instead of annas ten and pies eleven per running foot as provided in the contract."

BOMBAY, 18*th May* 1892.

AT the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M.; GEORGE COTTON, Esq.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; BURKISONDAS NURROTUMDAS, Esq.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON
H. A. ACWORTH, Esq., C.S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 11th instant, were signed.

No. 1450. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Spencer & Co., for the construction of a night-soil depôt at the north end of DeLisle Road, and (2) with Messrs. Moosabhoy Adamji & Son, for the supply of drawing and surveying materials during 1892-93.

The seal was also affixed (1) to 22 attested duplicate debentures of the Sanitary Works Loan of 1885 of Rs. 500 each, Nos. 1170/6, 1887/99, 2620/21 ; and (2) to 8 consolidated debentures of the Municipal Loan of 1878, Nos. 3294/3357 of Rs. 32,000, Nos. 3033/3103 of Rs. 35,500, Nos. 3772/93 of Rs. 11,000, Nos. 4018/27 of Rs. 5,000, Nos. 4255/73 of Rs. 9,500, Nos. 4593/652 of Rs. 30,000, Nos. 5292/95 of Rs. 2,000, Nos. 5377/87 of Rs. 5,500.

No. 1451. *Resolved*: "That, as applied for by the Commissioner, in his memoranda Nos. 3080 and 3081, dated 13th instant, sanction be given under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Balla Shimga	Building at Gunpowder Road.
„ Issabhoy Mulla Abdulali ...	Do. at No. 12, Dolker Street "

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 3452, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 1452.

Resolved : "That, as applied for by the Commissioner, in his letter No. 2988, dated 12th instant, sanction be given to the purchase of 300 tons of Powell's Dufferin Cardiff coal from Messrs. Killick, Nixon & Co. at the rate of Rs. 19-4-0 per ton, delivered at the Love Grove Pumping Station.

No. 1453.

"2. That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as similar arrangements sanctioned by the Committee's Resolution No. 9755, dated 7th January 1891, for the purchase of coal during the current year have been advantageous to the Municipality."

Resolved : "That the following be *recorded* :—Letter No. 3122, dated 13th instant, from the Commissioner, reporting that he has sold the rights of fishing, and planting and gathering Singodas in Municipal tanks during 1892-93 as per statement submitted.

No. 1454.

No.	Name of place.	Name of highest bidder.	Amount for 1891-92.	Amount for 1892-93, including Municipal Rates and Taxes.	Area.	Municipal Rates and Taxes.
			Rs.	Rs.	Sq. yds.	Per year.
1	Savli Tank at Parbhadevi...	Maugru Jaga	35	10	3,700	Rs. 2 10
2	Diggi Tank at Mahim	Do. ...	105	101	8,650	„ 8 5
3	Hasali Tank at Mahim	Do. ...	57	39	5,100	„ 4 6
4	Jambli Tank at Mahim	P. Fernandes	26	20	3,400	„ 2 3

Resolved : "That, as applied for by the Commissioner, in his letter No. 3273, dated 16th instant, sanction be given to the payment of Rs. 25-7-6 as travelling expenses incurred by Mr. Stevens and Messrs. Gostling and Morris in going to and returning from Pawai in connection with the acquisition of land for the Pawai Water Works. The amount to be met from the allotment for purchase of land at Pawai."

No. 1455.

Resolved : "That, as applied for by the Commissioner, in his letter No. 3277, dated 16th instant, sanction be given, under sections 211 and 517 (*i*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Bai Gulbai, daughter of Mr. Mancherji Bomanji Cooper, for the recovery of Rs. 59-10-2, being the amount of assessment bills due by her for premises at Fourth Marine Street, as per list accompanying the said letter."

No. 1456.

Resolved : "That, as applied for by the Commissioner, in his letter No. 3195, dated 14th instant, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Messrs. Mooljee Geega, Muncherjee Merwanjee Dadina and Hoosseinbhai Ismailjee Dhondfora jointly, for the recovery of Rs. 264-12-6, being the amount due on account of General and Halalkhor taxes for premises in Golanja Hill Road, as per list accompanying the said letter."

No. 1457.

Resolved : "That, as applied for by the Commissioner, in his letter No. 3196, dated 14th instant, sanction be given, under section 69 (*e*) of the Municipal Act, to a variation of the contract with Messrs. Adamjee Abdul Ali & Co., for the supply of petty stores, for the current year, whereby Messrs. Adamjee Abdul Ali's rate for the supply of chunam fine for plastering will be reduced from Rs. 17-8-0 to Rs. 16 per 100 cubic feet."

No. 1458.

Resolved : "That Messrs. Pandurang Nulajee, Harichan Babaji and others be informed, in reply to their letters of 9th March and 25th April last and dated this day, that the question of improving the water-supply of the locality in question is under consideration, but that at present there are no funds available for carrying out such improvements. It is hoped, however, that savings will accrue in the course of the year, which will permit of the necessary work being undertaken."

No. 1459.

Resolved : "That Mr. Damodher Raoji and other residents of Ganesh Ramji's chawl, Girgam, be informed in reply to their letter, dated 11th April last, that the Executive Engineer, Water Works, reports that supply of water to the chawl is now good, that there is no ground for complaint, and that on a meter being affixed to ascertain what the actual consumption of

No. 1460.

water is, the owner of the chawl, Mr. Damodher Ganesh, wrote stating that water rises to the third floor when the ground floor taps are kept closed."

Resolved: "That Mr. J. Turner be informed in reply to his letter, dated 2nd ultimo, that the Executive Engineer reports the house complained of in Bhendi Bazaar is not in such a state as to warrant any action being taken by the Municipality."

No. 1461.

Resolved: "That the following be laid on the table :—

Letter, dated 13th instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of receipts and disbursements at the end of each week for the month of April last, and compared them with the ledgers and journals and found them correct. Forwarding summary and statements of their scrutiny of accounts."

No. 1462.

Resolved: "That the following be *recorded* :—Memorandum No. 2846, dated 11th instant, from the Commissioner, reporting, with reference to the resolution of the Committee, No. 5620, dated 9th January 1889, the transfer of Rs. 5,018-0-10 from the Municipal Loan Sinking Fund deposit account to the surplus cash deposit account on 4th instant."*

No. 1463.

The following return was read and *recorded* :—

Return of fires at Malabar Point, Parel Tank Road, Fergusson Road (Star of India Mill), Malabar Hill and Kumbarvada 2nd Street, forwarded with the Commissioner's memorandum Nos. 2710 and 3237, dated 9th and 14th May 1892.†.

The following statement ‡ was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 15th May 1892.

Proposed by George Cotton, Esq., seconded by A. G. Viegas, Esq.—

"That, as applied for by the Commissioner in his letter No. 3350, dated 17th instant, the Committee approve of his engaging temporarily the services of Mr. G. F. Horbury for the proper supervision of the engines and engineer at the Love Grove Pumping Station.

No. 1465.

* The balance standing to the credit of the Sinking Fund deposit account after effecting the above transfer amounts to Rs. 4,29,545-3-2 (Rs. 45-3-2 in cash and Rs. 4,29,500 in 5 per cent. Municipal debentures).

† *See* Appendix **C**. ‡ *See* Appendix **B**.

"That the Corporation be recommended to sanction the payment to Mr. Horbury of Rs. 25 per visit, such visits not to exceed twice a week.

"The amount to be met from the sum of Rs. 200 per mensem which is available after making arrangements for the conduct of the duties of Mr. Rowe, the late Superintendent of Workshops."

Carried.

No. 1466. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 3331, dated 17th instant, and in lieu of the resolution of the Town Council, No. 1297, dated 5th October 1887, sanctioning the payment of compensation to Essoo Luxamon at the rate of Rs. 4 per square yard for the 3·37 yards of ground to be acquired for street improvement purposes at Kumbarwada, sanction be now given to the payment of such compensation in respect of 3·54 square yards of land (the actual area added to the road) to Messrs. Vittoba Trimbackjee and Essoo Luxamon, trustees and managers of the Gurwar Nahvi Bajan Mandli."

No. 1467. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 3425, dated this day, sanction be given to the acceptance by him of the tender of Messrs. Byramji Jehangir & Co., the lowest of six tenders received, for the work of repairing the Tulsi main embankment between Haines Road and Mahim at Rs. 2-3-0 per brass. The total cost, Rs. 17,500, to be met out of the grant for the work."

No. 1468. *Resolved*: "That the following be *recorded*:—Memorandum No. 3424, dated this day, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 14th instant."

No. 1469. Considered list of *outstanding business* (1st May 1892).

Item No. 4.—The Commissioner asked to obtain Counsel's opinion in regard to the question whether section 521 of the Municipal Act, in the chapter of the supplemental provisions in relation to section 21 of the Indian Penal Code, applies to all Municipal servants employed before the present Municipal Act came into force.

Struck out, the opinion of Mr. James Jardine having been placed before the Committee on 4th instant.

Item No. 6.—Letter No. 26838, dated 16th February 1892, from the Commissioner, asking sanction to the filing of a suit against Bai Motlibai, widow of Mr. Maneckji Navroji Wadia, for the recovery of Rs. 8,874-13-1, being the amount of property taxes due by Bai Motlibai.

Struck out, as the Commissioner stated that the case has been settled.

Item No. 9.—Letter, dated 9th March 1892, from Messrs. Pandurang Mulajee, Harichand Babaji and others, complaining of the want of pure water-supply in Coombharwada Street, Lower Mahim.

Struck out, report from the Commissioner on the subject having been presented and disposed of this day.

Item No. 10.—Letter, dated 2nd April 1892, from Mr. J. Turner, stating that house No. 550 at Parel Road, Bhendi Bazaar, belonging to one Saho Bhai Peera, is in a dilapidated condition and likely to fall in the rains.

Struck out, report on the subject from the Executive Engineer having been presented and disposed of this day.

Item No. 11.—Letter, dated 11th April 1892, from Mr. Damodher Raoji and other residents of Ganesh Ramjee's chawl, Girgaum, complaining of an insufficient supply of water.

Struck out, report on the subject from the Deputy Executive Engineer, Water Works, having been presented and disposed of this day.

Item No. 12.—Petition, dated 13th April 1892, addressed to the Corporation by Messrs. Dhondoo Muckoond, Vithoo Rambafe and others complaining of the enhanced license fee for the sale of hay.

Struck out, the question having been disposed of by the Committee's resolution No. 1224, on the 11th instant.

BOMBAY, *25th May* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M.; GEORGE COTTON, Esq.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; K. M. SHROFF, Esq.; A. G. VIEGAS, Esq., L. M. & S.
H. A. ACWORTH, Esq., C. S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 18th instant, were signed.

The seal of the Corporation was affixed (1) to the sub-divided debentures of the Tansa Water Works Loan,

Nos. 1851/1900 of Rs. 5,000 each ; and (2) to 15 consolidated debentures, Nos. 1463/74 Rs. 6,000, Nos. 1718/37 Rs. 10,000, Nos. 1738/57 Rs. 10,000, Nos. 1758/61 Rs. 2,000, Nos. 4415/514 Rs. 50,000, Nos. 4515/24 Rs. 5,000, Nos. 4525/32 Rs. 4,000, Nos. 4705/24 Rs. 10,000, Nos. 4725/44 Rs. 10,000, Nos. 4745/64 Rs. 10,000, Nos. 4765/84 Rs. 10,000, Nos. 4785/804 Rs. 10,000, Nos. 5347/56 Rs. 5,000, Nos. 5357/66 Rs. 5,000, Nos. 5367/76 Rs. 5,000.

No. 1521. *Resolved* : "That, as applied for by the Commissioner, in his memoranda Nos. 3432, 3433 and 3434, dated 18th instant, and Nos. 3751 and 3900, dated 21st and 25th idem, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Esmailji Sullemanji	Building at Nos. 114-116, Guzar Street.
„ Dadabhai Dhunjibhai	„ at Supari Bhag Road.
The Manager, Ripon Mill	„ at Haines Road.
The Administrator General... ...	„ at Govt. Gate Road, Parel.
Mr. Moosai Abdoola...	„ at Ripon Road."

No. 1522. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 3936, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 1523. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 3582, dated 19th instant, sanction be given, under section 172 of the Municipal Act, to special halalkhor tax being charged as under against the following Hospitals :—

	Per mensem.
European General Hospital ...	...Rs. 50 7 6
Gokuldas Tejpal do.	... „ 50 13 0
Cama and Albless do.	... „ 23 11 5
Jaffer Sulleman Dispensary ...	... „ 3 6 3
Jamsetjee J. Hospital	... „ 201 14 1"

No. 1524. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 3655, dated 20th instant, sanction be given to the acceptance by him of the tender of Messrs. Palanji S. Mistri & Co., the lowest of six tenders received, for the construction of the Foras Road Market at a cost of Rs. 39,542. The amount to be debited to the grant for the work."

No. 1525. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 3599, dated 20th instant, and under the Pension Rules, sanction be given to the payment of a monthly pension of Rs. 2-15-7, from 8th March last, to Luxuman Ballaji, lascar, Executive Engineer's Department, a contributor to the Pension Fund."

No. 1526. *Resolved*: "That the following be *recorded* :—Letter No. 3647, dated 20th instant, from the Commissioner, reporting under Rule XVI, Section C, Chapter I, of the Municipal By-laws, that he has appointed Mr. McNally as Inspector of Licenses on a salary of Rs. 150, *plus* Rs. 30 as conveyance allowance. Mr. McNally is over 35 years of age, and the special reasons for appointing him are that he has been strongly recommended as a capable and trustworthy man, and that he will not be allowed to contribute to the Pension Fund."

No. 1527. *Resolved* : "That the Corporation be recommended to inform Mr. Noor Mahomed Gangji, in reply to his application, dated 9th February last, that no effort is spared by the officers of the Municipality to detect the illicit manufacture of tallow and to ensure the exclusion of improper materials in the manufacture of ghee. That action was recently taken against certain people for melting and storing tallow without a license, with the result that two of them were fined, while the third was warned by the Magistrate."

No. 1528. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 3589, dated 19th instant, the Corporation be recommended to sanction the renewal from Mr. Byramji Nowroji, of the lease of the Fire Brigade quarters at Hornby Road for a period of two years from 30th September next, at a monthly rental of Rs. 275, the Municipality having the option of terminating the lease at the end of one year, in which case the owner is to be paid at the rate of Rs. 300 per mensem for the shorter period.

"That, in order to meet the excess on the present rental (Rs. 250 a month), sanction be given to the transfer of Rs. 125, from savings in Section I, Fire Brigade establishment, to Section II, rent repairs, and miscellaneous rent of Fire Brigade stations and quarters."

Resolved: "That the following be laid on the table and brought on for consideration next week :—
No. 1529. Progress report of new works in course of construction up to the end of March 1892."

Resolved: "That the following be *recorded*:—Memorandum No. 3898, dated this day, from the
No. 1530. Commissioner, reporting that there was a case of burst in the 48" Tansa main near Naigam tank on the last day of the week ending 21st instant."

Considered letter No. 3715, dated 20th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to forward copy of a letter from Messrs. Walsh, Lovett, Mitchell & Co., in which they ask (*a*) for the return of a part of their deposit; (*b*) that the Corporation should, for a payment of Rs. 5,000, relieve them of the cost of maintenance; with the Engineer's report thereon. Under the terms of clause 27 of their contract, the retention of their deposit during the entire maintenance period, *viz.*, from the 1st February 1892 to 1st February 1893, is provided for. The deposit amounts to 3 lakhs; but there is no real necessity to retain so large a sum in our hands, and I should be inclined to release our lien over half the sum, *i.e.*, 1½ lakhs. The balance will be an ample security. I am not prepared, however, to recommend for approval the contractors' proposal on the subject of maintenance.—I have, &c., H. A. ACWORTH, Commissioner.

BOMBAY, 9*th May* 1892.

THE MUNICIPAL COMMISSIONER.

SIR,—As our contract with the Municipality is finished and the maintenance of the work cannot amount to much, we shall be obliged by your returning at once a large portion of our deposit, say, 2 lakhs, or at least one-half, as it would be a convenience to us, and there cannot be any necessity to retain so large a sum as 3 lakhs, which was intended as a guarantee for the completion of the great work.

With regard to maintenance, as the duct has already stood one monsoon, without showing any bad workmanship, and the only repairs necessary on account of the last monsoon were a small amount on the high banks at the Bassein Creek, this would be the only portion of the work which would cause any anxiety in the coming monsoon; but as your Engineer has admitted that these banks were defective by proceeding to widen them with suitable earth, we consider ourselves relieved from any responsibility with regard to them. It therefore seems a pity that as the Corporation are retaining a staff, that we should also

do so to do nothing, in fact, probably be in the way of your staff having a free hand, and we should be willing to allow the Corporation the cost, which we estimate at Rs. 5,000, if we are relieved at once, the amount of repairs for which we could be responsible could not come to a quarter of this sum, from the experience of last monsoon.—We have, &c.,

WALSH, LOVETT, MITCHELL & Co.

No. 153 OF 1892-93.

BOMBAY, *12th May* 1892.

TO THE MUNICIPAL COMMISSIONER.

SIR,—I have the honour to acknowledge receipt of your No. 2747* of 10th instant, forwarding letter, dated 9th instant, from Messrs. Walsh, Lovett, Mitchell & Co., the contractors for the Tansa Duct from Tansa to Ghatkopar, asking that a portion of their deposit may now be returned to them, and also asking to be relieved of any further maintenance on payment of a fixed sum by them.

* Herewith returned.

2. Regarding return of a portion of their deposit of Rs. 3,00,000, it is clearly stated in paras. 26 and 27 of the contract that the deposit shall be retained by the Commissioner for a period of 12 months after the completion of the works. Aside from this, I see no objection to half their deposit being now returned to them. The works have been completed as per this office No. 51 of 18th ultimo, and water has been passing for some time from Tansa to Ghatkopar. I cannot entirely confirm the statement in the second para. of Messrs. Walsh, Lovett, Mitchell & Co.'s letter, that the duct has stood one monsoon without showing any bad workmanship. But at the same time I am of opinion that half the deposit or Rs. 1,50,000 would be ample security to the Municipality against any defects in the works which might become apparent during the period of maintenance, and which could be ascribed to Messrs. Walsh, Lovett, Mitchell & Co.

3. With regard to the high banks at the Bassein Creek, it is the case that they are being widened; and this widening, as also some other extra works along the line of the duct, is not being carried out by Messrs. Walsh, Lovett, Mitchell & Co.,—they latterly having expressed wishes to the effect that any extra work for which extra payment would have to be made should be carried out by the Municipality instead of by them, as they were desirous for reasons of their own, of confining their operations as much as possible after the general completion of the works. And as these extra works could be carried out by the Municipal staff at no greater expense to the Municipality than if done through Messrs. Walsh, Lovett, Mitchell & Co., their wishes were complied with. Whether under

these circumstances, Messrs. Walsh, Lovett, Mitchell & Co. are relieved, as they consider, of all responsibility as regards the high banks, may be a matter of opinion.

4. Regarding their request to be relieved at once of all further maintenance on payment of Rs. 5,000, I consider that all ordinary maintenance would most probably be covered by an expenditure of from Rs. 5,000 to 10,000, the Municipal supervising staff being available for the carrying out of the same. In case of disputes arising as to the extent of responsibility of the contractors under any particular circumstances, there would probably be advantages in the arrangement; and in a case of urgency there might be saving of time. If, however, any such arrangement were come to, it would of course require to be clearly understood that all clauses and conditions of the contract would hold good against the 1½ lakh as against the full deposit of 3 lakhs in case of defects such as referred to in the second para. of this letter, and as security to the Municipality in every way as at present. On the whole, I think that the wishes of Messrs. Walsh, Lovett, Mitchell & Co. might be met in this matter if a sufficiently clear understanding could be arrived at.

5. If the maintenance were now given up by the contractors, it would be necessary for the Municipality to take over a certain quantity of plant, such as trucks, some diving gear, pipe laying tools, chain and other tackle, &c. This plant would be required in any case at the end of the contractors' period of maintenance, the only difference being that it would require to be taken over now instead of later on. I estimate this plant, including two or three storehouses along the line, at about Rs. 7,000.—I have, &c., T. C. H. WHITE, C.E., *for* Executive Engineer, Tansa Works.

Proposed by Abdulla M. Dharamsi, Esq., seconded by A. G. Viegas, Esq.—

No. 1531.

"That in reply to their letter, dated 9th instant, to the address of the Commissioner, Messrs. Walsh, Lovett, Mitchell & Co. be informed that the Standing Committee cannot see their way to return Messrs. Walsh, Lovett and Mitchell's deposit at present, but will be prepared to consider the question of the return of a portion of their deposit after the monsoon.

"2. That the Committee agree with the Commissioner in disapproving of the proposal made by the contractors that they should be relieved of the liability for the cost of the maintenance of the duct works on payment by them of Rs. 5,000."

Carried unanimously.

The following statement * was laid on the table:—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 22nd May 1892.

No. 1532. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 3899, dated this day, sanction be given, under section 268 (2) of the Municipal Act, to the removal of the katcha brick wall newly erected by Messrs. Awana Mona Mahomed Lubbay & Co., over the 12" water main at Dharavi."

No. 1533. *Resolved* : "That, with reference to the Standing Committee's Resolution No. 13151, dated 24th February last, and as applied for by the Commissioner in his letter No. 3795, dated 23rd instant, sanction be given to his purchasing in the bazaar, instead of from the contractor for petty stores (the bazaar rates being lower), such of the articles required for the departmental construction of house connections in the 1st Drainage Section, as old hemp rope, stone dhapas 3' × 1' × 4", stone paving medium dressed 9" × 9" × 3", with + cut on the top to mark position of siphons."

Considered letter No. 3946, dated this day, from the Commissioner to the Secretary, as under :—

SIR,—I have the honour to state that it is very important for the better utilization of the Tansa supply that a connection should be made at Chinchpokli between the Tansa 48" main and the Vehar 32", so that Tansa water can be supplied to Bhandarwada reservoir. The 32" Vehar main being also connected with the Arthur Road 27" and the Vehar 24" in Parel Road with the same main, we shall then be able to supply Vehar water into the 27" Arthur Road main.

2. These changes will enable us to meet the night demand with Vehar water from the 32" main, leaving the larger Tansa supply to be stored up for use during the morning and evening when the demand is so much greater.

3. The cost of these will be Rs. 7,164-8-0 as per detailed estimate. This sum can be met out of savings on the grant of Rs. 63,360 for laying Queen's Road 24" main, which work is now completed and the final cost will be about Rs. 51,000.

4. It is requested, therefore, that the Standing Committee will recommend the Corporation to sanction the execution of the work out of the above savings.—I have, &c., H. A. ACWORTH, Commissioner.

* *See* Appendix B.

Detailed estimate for connections at Chinchpokli between Tansa and Vehar Mains.

		Rs.	a.	p.
1.	*Between the Tansa 48″ main and the Vehar 32″ main—*			
1	No. 32″ sluice valve	800	0	0
3	Tons straight 32″ pipes at Rs. 105	315	0	0
11	Tons 32″ special castings at Rs. 140	1,540	0	0
	Lot laying, jointing 32″ straight and special pipes and sluice valve	360	0	0
1	No. breaking 32″ main and putting in junction pipe	150	0	0
1	No. masonry chamber over 32″ sluice valve with covering complete	250	0	0
		3,415	0	0
	Add—15 per cent. contingencies...	512	4	0
		3,927	4	0
2.	*Between Vehar 32″ main and the 27″ main—*			
1	No. 20″ sluice valve	300	0	0
12	Tons special castings at Rs. 140	1,680	0	0
	Lot laying, jointing 20″ special pipes and sluice valve	350	0	0
1	No. chamber over 20″ sluice valve	150	0	0
		2,480	0	0
	Add—15 per cent. contingencies ...	372	0	0
		2,852	0	0
3.	*Between the 27″ mains—*			
1	No. 12″ sluice valves	115	0	0
1	Ton special castings	140	0	0
	Fixing saddle pieces on existing mains and laying 12″ pipes and fixing sluice valve ... (No chamber required)	80	0	0
		335	0	0
	Add—15 per cent. contingencies	50	4	0
		385	4	0

Summary—

	Rs.	a.	p.
No. 1.....	3,927	4	0
„ 2.....	2,852	0	0
„ 3.....	385	4	0
Rs. ...	7,164	8	0

Resolved: "That, as applied for by the Commissioner, in his letter No. 3946, dated this day, the Corporation be recommended to sanction the payment of Rs. 7,164-8-0 to meet the cost (1) of making a connection at Chinchpokli between the Tansa 48″ main and the Vehar 32″ main, so that Tansa water can be supplied to Bhandarwada reservoir; (2) of connecting the 32″ Vehar main in Parel Road with the Arthur Road 27″ main; and (3) of connecting the 24″ Vehar main in Parel Road with the 27″ main in Arthur Road in order to supply Vehar water to the Arthur Road 27″ main.

No. 1534.

"The amount to be met out of savings in the grant of Rs. 63,360 for laying the Queen's Road 24″ main, which work has been completed at a cost of Rs. 51,000."

Proposed by Harkisondas Nurrotumdas, Esq., seconded by George Cotton, Esq.—

"That, as applied for by the Commissioner, in his memorandum No. 3950, dated this day, and under the circumstances reported by the Acting Executive Engineer, in his letter to the Commissioner, No. 817G, of the same date, sanction be given to the acceptance by the Commissioner of the tender of Messrs. Vishnu Narsingrao & Co., the second lowest of the five tenders received for constructing pipe sewers and metal ventilating shafts in Parel village, at a total cost of Rs. 15,232.

No. 1535.

"The amount to be met from the grant for the work."

Carried (with one dissentient).

BOMBAY, 1*st June* 1892.

AT the meeting of the Standing Committee held this day, there were present:—

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; GEORGE COTTON, Esq.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; K. M. SHROFF, Esq.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

In the absence of the Chairman on account of illness, Mr. George Cotton was, on the motion of Mr. K. M. Shroff, seconded by Mr. Bhalchandra K. Bhatawadekar, voted to the chair.

The minutes of the meeting held on the 25th ultimo, were signed.

No. 1647. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. H. Cassum & Co., for the supply of clothing to the Fire Brigade staff; (2) with Messrs. Killick, Nixon & Co., for the supply of 1,000 tons of Davison's West Hartley coal at Rs. 18-8-0 per ton; and (3) to deed of agreement between Mr. Hormasji Jivanji and the Corporation, securing to the Corporation the right to acquire at any future time, the set back of property situated at Nos. 1 and 2, Charni Road, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 10 per square yard, for any land shown on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition, but exclusive of compensation for any other authorised structure standing upon the said ground at the date of the acquisition.

No. 1648. *Resolved*: "That, as applied for by the Commissioner, in his memoranda Nos. 4136, 4137 and 4138, dated 27th May 1892, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.				Where.
Mr. Bhana Dayer	...	...	...	Building at Parel Lal Bhag.
„ Bath Petch	...	...	...	„ at Fergusson Road.
„ Jairam Damodhur	...	...	...	„ at Banganga Road."

No. 1649. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 4493, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 1650. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 4218, dated 20th May 1892, and subject to the approval of the Corporation, under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 1,860, from the grant for new works, providing ventilating shafts on Ripon Road sewer, to meet the cost of constructing 2 masonry and 2 metal ventilating shafts on Queen's Road."

No. 1651. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 4329, dated 30th May 1892, sanction be given to the appropriation of Rs. 815, from savings which have accrued on the budget allotment for labour employed on cleaning drains, &c., for

the past two months, to meet the cost of labour in excess of the scheduled strength, required for removing the deposit of mud from the lock gates at Clerk Road Bridge and the point where the west side wall of the channel through the reservoir begins, so that the storm water coming down from Bellasis Bridge may have a distinct direction into the channel on the west side of the new main sewer.

"That sanction be also given to the appropriation of any further savings which may accrue in the said grant for labour not exceeding Rs. 139 that may be required to make up the total estimated cost (Rs. 954) of extra labour."

No. 1652. *Resolved*: "That letter No. 4325, dated 30th May 1892, from the Commissioner, be *recorded*.

"2. That with reference to their resolutions Nos. 286 and 719, dated 30th April 1883 and 10th August 1885, respectively, the Corporation be recommended to sanction the payment, from surplus cash balance,* of Rs. 1,244-4-9, or with interest at 6 per cent., from 18th December 1884 to 26th May 1892, Rs. 1,803-4-11, being the amount paid to the Collector of Bombay, in accordance with the orders of the High Court as compensation on account of land acquired, under the Land Acquisition Act, from Mr. Vishvanath Damodar; Mathurabai, widow of Mr. Raghunath Damodar, and from other persons, for the low-caste Hindu Cemetery at Haines Road."

Read the following letter, No. 4051, dated 26th ultimo, from the Commissioner, to the Secretary:—

SIR,—I have the honour to request the favour of the sanction of the Standing Committee and Corporation to an additional grant of Rs. 2,460-14-0, from surplus cash balance, for making payment to Government on account of arrears of rent due to them by the Municipality from 9th December 1868 to 8th December 1891, and that which will be due from 9th December 1891 to 8th December 1892, of the land occupied by the Municipality between Paltan Road and the G. I. P. Railway.

2. The ground occupied by the Municipality, it has been ascertained, admeasures 19,687 square yards, and the rent, at one pie per square yard per annum, amounts to Rs. 102-8-7. The charge should have been preferred by Government regularly every year from the 9th December 1868, but this was not done. No portion, however, of the claim is time-barred.

* The amount of the surplus cash balance is as under:—Amount reserved for extra grants up to the end of 1891-92. Rs. 79,703; amount of grants sanctioned (excluding temporary advances to be adjusted hereafter) Rs. 33,817-14-0; amount recommended for sanction Rs. 5,128-15-8. Balance available Rs. 40,756-2-4.

3. Provision for the payment of the rent will be made in future budgets.

4. The state of the surplus cash balance is as follows :—

Amount reserved for probable extra grants as per current year's budget		Rs. 79,703	0 0
Deduct—			
Amount of grants already sanctiond (excluding temporary advances to be adjusted hereafter)	Rs. 33,817 14 0		
Recommended for sanction	„ 2,668 1 5		
		36,485	15 5
Available Rs. ...		43,217	0 7

—I have, &c., H. A. ACWORTH, Commissioner.

No. 1653. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4051, dated 26th May 1892, the Corporation be recommended to sanction the payment of Rs. 2,460-14-0, from surplus cash balance,* to meet the rent due to Government for the 19,687 square yards of land occupied by the Municipal Workshops (one pie per square yard, or Rs. 102-8-7 a year) from 9th December 1868 to 8th December 1892."

No. 1654. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4326, dated 30th May 1892, sanction be given to the payment of Rs. 816-13-6, to Messrs. Richardson & Cruddas, on account of iron castings supplied by them to the Municipality."

No. 1655. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4161, dated 27th May 1892, sanction be given to the payment of Rs. 120-1-0, to Messrs. Richardson & Cruddas on account of bolts and nuts supplied by them for the 48" Tansa main. The amount to be met from the grant for the work."

No. 1656. *Resolved* : "That the following be forwarded for the information of theCorporation, with reference to their resolution No. 1021, dated 5th May 1892 :— Letter No. 4170, dated 27th May 1892, from the Commissioner, reporting that six maistrees in addition to the number sanctioned for the Tansa Works, still in progress, under the Corporation's resolution No. 1021, dated 5th idem, were employed during April last, and will also be kept in service

* The state of the surplus cash balance is as under :—Amount reserved for extra grants as per current year's budget Rs. 79,703 ; amount of grants already sanctioned (excluding temporary advances to be adjusted hereafter) Rs. 33,817-14-0 ; amount recommended for sanction Rs. 2,668-1-5 ; amount available Rs. 43,217-0-7.

during the month of May, but that the total of the grant for establishment for the two months has not been and will not be exceeded."

No. 1657. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 4031, dated 26th May 1892, sanction be given to the payment of Rs. 3-1-7, being the amount of 8 days' wages, to Gunia Balloo, who was injured in the right eye and chest while removing the crank of the 18 inch centrifugal pump at Love Grove and was consequently unable to work during those days."

No. 1658. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4337, dated 30th May 1892, the Corporation be recommended to sanction the expenditure of Rs. 14, under section 67 (*b*) of the Municipal Act, to meet the cost of the removal of the telephone and bell from the Love Grove Station engine house, to the Dynamo room, and to provide an extra bell in connection therewith. The amount to be met by a transfer from savings under section IV, Contingencies, to section VII, telephone connections, Love Grove Pumping Station."

No. 1659. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 4308, dated 30th May 1892, sanction be given to the payment of Rs. 108, to the several witnesses examined, or who were in attendance to be examined in the Magistrate's Court at Thana, and who assisted in gathering evidence in connection with the Pawai land case. The amount to be met out of the allotments for the Pawai water works."

No. 1660. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 4014, dated 26th May 1892, and in lieu of the resolution of the Town Council, No. 620, dated 25th April 1888, sanctioning the payment of compensation to Mr. Sobhagchand Dowlatchand at the rate of Rs. 15 per square yard for the 5·61 yards of land acquired for street improvement purposes at Lohar Street, sanction be now given to the payment of such compensation to Messrs. Sakerchand Lalbhai and Gellabhai Lalbhai."

No. 1661. *Resolved* : "That, in continuation of the resolution of the Committee No. 477, dated 13th April last, the Corporation be recommended, in extension

of their resolution No. 1430, dated 12th May 1892, to sanction the exemption of Mr. P. C. Higgins, Superintendent of Markets, from furnishing security on the ground of his length of service. That future incumbents of this post be required to furnish the requisite security."

No. 1662. *Resolved:* "That the following be *recorded*:—Memorandum No. 4135, dated 27th May 1892, from the Commissioner, forwarding a statement of houses or portions of houses which fell during March last."

No. 1663. *Resolved*: "That the following be *recorded*:—Memorandum No. 4408, dated 31st May 1892, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 28th instant."

Considered the Progress Reports, up to the end of March 1892, of new works now in course of construction.*

No. 1664. *Resolved*: "That the Progress Report of new works in course of construction up to the end of March 1892, be *recorded*."

No. 1665. *Resolved:* "That the consideration of the report of the Sub-Committee appointed to report on the proposed improvement of the distribution of water, be postponed till next week."

No. 1666. *Resolved*: "That the following be *recorded*:—Memorandum No. 3897, dated 25th May 1892, from the Commissioner, reporting, with reference to the resolution of the Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 50,000, from the surplus cash deposit account, to the Municipal General Fund Pass Book on 18th idem."†

No. 1667. *Resolved*: "That the following be forwarded to the Commissioner for remarks and that the applicant be informed accordingly:—Letter, dated 30th May 1892, from Mr. Nana Moroba, stating that he has been served with a notice by the Executive Engineer, Drainage, for the removal of the 6″ × 6″ stoneware gully traps from his property at Girgam and to replace them

* *See* Appendix D.

† The balance now standing to the credit of the surplus cash deposit account after effecting the above transfer amounts to Rs. 20,76,853-11-2 (Rs. 2,69,853-11-2 in cash and Rs. 18,07,000 in 5 per cent. Municipal Debentures).

by two new ones. That as the work was executed under the supervision of the Municipality, he does not see why he should now be called upon to put it right."

No. 1668. *Resolved* : "That the following be forwarded to the Commissioner for remarks in continuation of the Committee's resolution No. 1229, dated 11th May 1892 :—Further petition, dated 20th May 1892, from shoe-dealers complaining of their being prevented from selling shoes on the footpaths in the vicinity of the Crawford Markets."

The following return was read and *recorded* :—

Return of fires at Parel Road (Bhendy Bazaar), Haines Road, Old Race Course, Parel Cross Lane, Parel (Workshops) and DeLisle Road, forwarded with the Commissioner's memorandum Nos. 3791 and 4336, dated 23rd and 30th May 1892.*

The following statement † was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 29th May 1892.

No. 1670. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4428, dated 31st May 1892, sanction be given to the acceptance by him, of the tender of Messrs. Vishnu Narsingrao & Co., the lowest of seven tenders received, for the construction of a storm water drain in Hornby Road, from the Salvation Army Hall to Bazar Gate Street. The amount, *viz.*, Rs. 14,181, to be met out of the sum of Rs. 21,598, sanctioned by the Corporation, in their resolution No. 188, dated 6th April last."

No. 1671. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4517, dated this day, and in lieu of the resolution of the Committee No. 7202, dated 22nd October 1890, sanctioning the levy of Rs. 29 per quarter as stallage fee for the occupancy of stall No. 56 in the Erskine Road new fruit and vegetable market, sanction be now given to the right of such occupancy being sold for Rs. 22 per quarter."

No. 1672. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4524, dated this day, sanction be given to the acceptance by him, of the

* *See* Appendix C. † *See* Appendix B.

tender of Messrs. John Fleming & Co., the second lowest of the three tenders received, for the supply of road sweeping machines at a cost of Rs. 5,350.

"That sanction be also given to the acceptance by the Commissioner, of the tenders of Messrs. John Fleming & Co., the lowest of the three tenders received, for the supply of road scraping machines and for hydrants, hose, &c., for watering the roads at a cost of Rs. 2,720 and Rs. 3,640, respectively.

"That, in order to provide for the excesses of Rs. 175 and Rs. 170, respectively, over the grants for the purchase of road sweeping and scraping machines, sanction be given to the transfer of Rs. 345, from savings in the grant for C, road watering (hydrants and canvas hose), Executive Engineer's budget, to D, road repairs and maintenance 8, purchase of road sweeping and road scraping machines."

Considered list of Outstanding Business (1st June 1892)

No. 1673. Item No. 2—Letter No. 14184, dated 16th September 1891, from the Commissioner, forwarding report from the Executive Engineer on the subject of the distribution of the water supply after the introduction of the Tansa water into Bombay.

Struck out, the report of the Sub-Committee having been presented this day.

BOMBAY, *8th June* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KHRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; K. M. SHROFF, Esq.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., *Commissioner*; the DEPUTY EXECUTIVE ENGINEER, Water Works; and the SECRETARY.

The minutes of the meeting held on the 1st instant, were signed.

The seal of the Corporation was affixed (1) to deed of

No. 1900. contract with Messrs. Pallonji Shapurji Mistri & Co., for the construction of Inspectors' quarters at Malabar Hill Reservoir, &c.; (2) to deed of agreement between Mr. Ebrahim Abdul Karim and the Corporation, securing to the Corporation the right to acquire at any future time the set-back of property situated at Mustan Tank Road, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 7 per square yard, for any land shown on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition.

The seal was also affixed (1) to 1 attested duplicate debenture of the Tansa Water Works Loan of Rs. 1,000, Nos. 9683-4 ; (2) to 2 attested duplicate debentures of the Municipal Sanitary Works Loan of 1885 of Rs. 500 each, Nos. 2004-5 ; and (3) to 1 consolidated debenture of the Sanitary Works Loan of 1885 of Rs. 1,000, Nos. 2006-7.

No. 1901. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 4806, dated 6th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structure built without permission :—

Name of Owner.	Where.
Bai Javabai, wife of Mr. Parmanand Khimji	Building at Naigam Road."

No. 1902. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 4859, dated 6th instant, sanction be given, under section 351 of the Act, to the removal of the unauthorized work erected by Mr. Dayal Narayan, at Nos. 3-5, between Dariastan and Garibdas Streets, a portion of which is within the line of the street."

No. 1903. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 4982, dated 7th instant, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 1904. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 4652, dated 3rd instant, sanction be given to an agreement being entered into with Messrs. Abdul Karim and Narayen Kushaba for the performance of masonry and other piece-work, such as laying pipes, constructing chambers, &c., in connection with the carrying out of the work for the first drainage section at the same rates as those sanctioned for the work entrusted to Syed Amoor and Messrs. Pandu Kalu, Syed Hoosein Ahmed and Bapuji Essoo (*vide* resolutions of the Committee, Nos. 12208 and 473, dated 3rd February and 13th April last).

" That under the terms of section 72 (3) of the Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as the work which is being done departmentally is urgent, and as the piece work to be done by Messrs. Abdul Karim and Narayen Kushaba will not be of such extent as to necessitate the calling for tenders."

No. 1905. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 4858, dated 6th instant, sanction be given to the issue, until such time as it may

be found necessary to alter the rates, of water pipes and fittings required for Municipal works, or for sale to the public, at the rates sanctioned by the Standing Committee, in their resolutions Nos. 2898 and 5692, dated 7th August 1889 and 10th September 1890, respectively, and No. 1840, dated 6th May 1891, and as shown in the statements accompanying the Commissioner's letter No. 2216, dated 27th April 1891."

No. 1906. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4686, dated 3rd instant, sanction be given, under the terms of Section 69 (*e*) of the Municipal Act, to a variation in the contract with Mr. Shunkerao Baba Mandrupkar, for the supply of house number plates as per resolution of the Committee No. 8377, dated 4th November last, to allow of the supply being made as under :—

"$4\frac{1}{2}'' \times 3''$ oval iron number plates, each of 3 or 4 letters or figures, at Rs. 140 per 1,000.

"$3\frac{1}{2}'' \times 3''$ oval iron number plates, each of 1 or 2 letters or figures, at Rs. 130 per 1,000."

No. 1907. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4681, dated 3rd instant, sanction be given to his engaging the services of Mr. D. Gostling to give evidence for the Municipality before the Assistant Collector of Thana in the case of land taken up for the Tansa duct on the Pawai Estate on the same terms as those sanctioned in the Committee's resolution No. 1062, dated 7th May 1890, in the case of the acquisition of land for the Pawai Water Works, *viz.*—Rs. 20 per hour for all work out of Bombay and for any time spent in travelling, and Rs. 30 per hour for work done in Bombay, whether Mr. Gostling be engaged in office preparing papers, in consultation or attending Court for giving evidence. That these charges are to be in addition to travelling expenses incurred."

No. 1908. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 4680, dated 3rd instant, sanction be given to the acceptance by him of the tender of Mr. Byramji Jehangir, for filling in the low-lying ground in the Victoria Gardens at the rate of Rs. 2-1-0 per brass. The cost to be met from the Budget grant for the work.

"That under the terms of Section 72 (3) of the Municipal Act, the Standing Committee dispense with the invitations for tenders for the filling in, as the offers already received in response to advertisements inviting tenders for the same

were higher than the rate tendered by Mr. Byramji Jehangir."

No. 1909. *Resolved*: "That the following be *recorded*:—Letter No. 4856, dated 6th instant, from the Commissioner, reporting that he has sold the right of cutting grass on the sides of the water course at Elphinstone Road for the current year to one Dewoo Harset for Rs. 10, including the charge of As. 14 on account of general tax."*

No. 1910. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 4857, dated 6th instant, sanction be given, under section 305 of the Municipal Act, to written notices being issued, requiring the owners of the several houses fronting, adjoining or abutting 2nd and 3rd Pasta Lanes, to level and metal the same as the Commissioner shall direct."

The consideration of the Health Officer's Report for the first quarter of 1892 was postponed till next week.

No. 1911. *Resolved*: "That the following be *recorded*:—Memorandum No. 4981, dated this day, from the Commissioner, reporting that there was no case of burst on the Tansa main line during the week ending 4th idem."

Read petition, dated 7th December 1891, to the Chairman and Members of the Committee, from Messrs. J. J. Barretto, Bapujee Ballajee and others of Matunga, complaining of the flow of soiled water from the Leper Asylum on to certain land adjacent.

No. 1912. *Resolved*: "That Messrs. J. J. Barretto, Bapujee Ballajee and others be informed, in reply to their petition, dated 7th December last, that from inquiries made it has been ascertained that at the spot indicated there is, and always has been, more or less marshy ground due to the fact that the whole stretch of rice-land north and east as far as the Antop Hills drains into this corner.

"That the appurtenances of the Leper Asylum contribute only to a very minute extent to the damp state of the ground, but the Commissioner will, in the latter case, adopt remedial measures with the least possible delay.

"That the Corporation be recommended to reply in similar terms to the petition from the gentlemen above referred to."

The consideration of report of the Sub-Committee appointed to report on the proposed improvement of the distribution of water was postponed.

* The sale realised Rs. 5 last year.

Read letter No. 4925, dated 7th instant, to the Secretary, as under :—

SIR,—I have the honour to forward to the Standing Committee, with reference to the Corporation resolution No. 1023 of 5th ultimo, a draft inscription for approval, and to report that it can be executed on a marble tablet with gold lettering for Rs. 760. With regard to the intention kindly expressed by the Corporation that my name should appear on the tablet, I must, with all possible respect, decline to allow it to do so, as I do not consider that my association with the Tansa Water Works has been of sufficient importance to justify the distinction.—I have, &c., H. A. ACWORTH, Commissioner.

"THE TANSA WATER WORKS,
which supply the City of Bombay with 21 million gallons
of water per diem,
through a duct 55 miles in length,
from a lake 6 square miles in area,
were first designed and reported on to the Municipal Corporation by
Major HECTOR TULLOCH, R.E.,
Executive Engineer, Bombay Municipality, in the year 1872.
They were commenced in the year 1886, on the recommendation of
SIR CHARLES EDWARD KAYLL OLLIVANT, K.C.I.E., C.S.,
Municipal Commissioner for the City of Bombay,
Whose administrative and financial abilities were conspicuously
displayed during their construction.
He was supported in his recommendation by many prominent citizens, especially
Dr. THOMAS BLANEY,
Coroner of Bombay,
who has during the course of a long life gratuitously
given to the City
Services beyond computation in money.
The works were carried out by
Mr. W. J. B. CLERKE, M.I.C.E., C.I.E.,
with signal Engineering talent.
Completed during the time that *
Mr. H. A. ACWORTH, C. S.,
held the office of Commissioner,
at a cost of 150 Lakhs of Rupees,
And opened by His Excellency the MARQUIS OF LANSDOWNE,
G.C.M.G., G.M.S.I., G.M.I.E.,
Viceroy and Governor-General of India,
on 31st March 1892.
This tablet is erected by the command of
THE MUNICIPAL CORPORATION OF BOMBAY
in order to commemorate
the successful completion of an undertaking which
in costliness, magnitude and importance,
stands unrivalled among Municipal
works in India,
as well as the names of those who having been chiefly
instrumental to so great a result
best deserve the gratitude of the Citizens of Bombay.

By order of the Municipal Corporation. *May* 1892.

* The words "completed during the time that Mr. H. A. Acworth, C.S., held the office of Commissioner" were inserted by the Standing Committee on the proposal of Mr. Javerilal U. Yajnik.

Resolved: "That letter No. 4925, dated 7th instant, from the Commissioner, together with the draft inscription for the memorial tablets in connection with the Tansa Water Works, be forwarded to the Corporation with reference to their resolution No. 1023, dated 5th ultimo, and with the recommendation that the names of the Contractors for the dam and the duct line should also be included in the inscription.

No. 1913.

"That the Corporation be recommended to sanction the expenditure of Rs. 760 for the cost of putting up a gold lettered marble tablet in the new Municipal Offices.

"The amount to be met from the surplus cash balance."

In accordance with notice, it was proposed by Bhalchandra K. Bhatawadekar, Esq.—

"That in future any bursts occurring in any large water main, such as 24", 27", 32" and 48", specimen pieces of the broken pipes be placed before the Standing Committee."

The motion was seconded by K. M. Shroff, Esq.

Amendment, proposed by Colonel Wilson, seconded by the Hon'ble Mr. Fazulbhoy Visram—

"That in cases of bursts in the water mains the Commissioner be requested to obtain, from the Engineer in charge of the mains, reports as to the causes of burst, and that where the burst is due to a flaw in the metal, the Engineer submit specimen of the same through the Commissioner to the Committee."

No. 1914.

Mr. Bhalchandra K. Bhatawadekar *withdrew* the original motion in favour of the *amendment*, which was *carried* as a substantive motion.

In accordance with notice, it was proposed by Bhalchandra K. Bhatawadekar, Esq.—

"That the Commissioner be requested to furnish a statement giving the size, length, and value of iron pipes available in the Municipal stores, and also lying spare on the pipe lines of the Vehar, Tulsi and Tansa lakes, beginning with 3" and ending with 48"."

No. 1915.

The motion was seconded by K. M. Shroff, Esq., and *carried*.

It was agreed that sanction be given to the employment of a temporary clerk, on Rs. 20 a month, to the debit of Water Works contingencies, to be employed in getting out the information referred to in resolution No. 1915 as above.

No. 1916.

The following return was read and *recorded* :—

Return of fires at Gorab Road (Tank Bunder), Gogra Mohalla and Memon Mohalla (1st Street), forwarded with the Commissioner's memorandum No. 4800, dated 6th June 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 5th June 1892.

Resolved : " That the following be *recorded* :—Letter No. 4924, dated 7th instant, from the Commissioner, reporting, under Rule XVI, Section C., Chapter I, of the Municipal By-laws, that Mr. James Gibbs has been appointed Sub-inspector in the Health Department on a salary of Rs. 50 per mensem, although he is over 35 years of age.

No. 1918.

" The special reasons for appointing him are that he is capable of doing the Health Department work, possesses good certificates, and that he will not be allowed to contribute to the Pension Fund."

Read petition to the Corporation, dated 28th April 1892, signed by Messrs. E. D. Sassoon (per W. Lang), C. H. Boggs (per pro. Messrs. Sanday & Co.), Nensee Kairaz, Vissanji Khemji and about 150 others, on the subject of the state of Argyle Road and the side streets thereat.

Read also memorandum No. 4943, dated 7th June 1892, to the Secretary, as under :—

Memorandum.—The Commissioner has carefully examined Argyle Road. The surface is very fair and well consolidated ; but over a considerable extent depressions and pittings appear which must no doubt be trying to traffic, particularly carriages with springs. The reason is obvious. Argyle Road consists of a metalled surface without any packing below it and is exposed to more trying conditions of traffic than almost any road in the city. The traffic, particularly that of heavy laden bullock carts, is something enormous, and enough rapidly to deteriorate, any road not constructed in the most solid and substantial manner.

It is a great pity in the Commissioner's opinion that this and other Port Trust roads exposed to similar conditions were ever taken over with mere metalling on an insecure foundation. The consequence now is either that very unnecessary and never-ending expense must be gone to in continuous re-metalling, or that the roads must once for all be put into the condition in which they

* *See* Appendix C. † *See* Appendix B.

should originally have been. As regards present emergencies, parts of Argyle Road are entered for full metalling during the current monsoon, and the Commissioner will ascertain what would be the cost of packing as well as metalling. Having done this he proposes to ask the Port Trust whether they will share the cost of the latter as he thinks they should fairly do.

2. With regard to the side streets referred to in the complaint, Malet Road and the roads below Elphinstone Bridge have already been repaired.—H. A. ACWORTH, Commissioner.

No. 1919. *Resolved* : " That the Corporation be recommended to inform Messrs. E. D. Sassoon & Co. and others, in reply to their application, dated 28th April last, that the Argyle Road was made by the Port Trust and taken over from them by the Municipality ; and that it has a metalled surface only, without any packing below, although the road is exposed to more trying conditions than almost any thoroughfare in the city.

" That the Commissioner will ascertain the cost of packing and remetalling the road with a view to putting it into proper condition. That as regards present emergencies, the cost of full metalling the road during the current year has already been budgetted for.

" That the side streets referred to, Malet Road and roads below Elphinstone Bridge, have already been repaired."

BOMBAY, 15*th June* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, ESQ., G.G.M.C., *Chairman.*
ABDALLA M. DHARAMSI, ESQ., B.A., LL.B. ; BHALCHANDRA KRISHNA BHATAWADEKAR, ESQ., L.M. ; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, ESQ. ; HURKISONDAS NURROTUMDAS, ESQ. ; JAVERILAL UMIASHANKAR YAJNIK, ESQ. ; KAIKHOSRO N. KABRAJI, ESQ. ; K. M. SHROFF, ESQ. ; COLONEL W. H. WILSON.
H. A. ACWORTH, ESQ., C.S., Commissioner ; and the SECRETARY.

On the question of the signing of the minutes of the last meeting, it was agreed that a foot-note be inserted under the proposed inscription for the tablets commemorating the opening of the Tansa Water Works as follows :—

" The words ' completed during the time that Mr. H. A. Acworth, C.S., held the office of Commissioner,' were inserted on the proposal of Mr. Javerilal U. Yajnik."

The minutes were then signed.

No. 2291. The seal of the Corporation was affixed to deeds of contract with (1) Messrs. Richardson & Cruddas for supplying 15 wrought-iron gratings to be

fixed on siphon escapes in connection with the Tansa Water Works; (2) with Messrs. Killick, Nixon & Co. for the supply of 300 tons of Powell's Duffryn Cardiff coal at Rs. 19-4-0 per ton delivered at Love Grove; (3) with Mr. Babaji Essu for piece-work in laying branch pipe sewers, &c., in the first drainage section; (4) with Syed Husen Ahmed for piece-work ditto. ditto; (5) to deed of agreement for the hire of chawl at Colaba from Mr. Pestonji Dadabhoy for halalkhors.

The seal was also affixed (1) to 4 attested duplicate debentures of the Tansa Water Works Loan, Nos. 596-599, of Rs. 500 each; and (2) to 1 attested duplicate debenture of the Municipal Loan of 1878, No. 4902, of Rs. 500.

No. 2292. *Resolved*: "That, as applied for by the Commissioner, in his memoranda Nos. 5198 and 5263, dated 10th and 11th instant, and Nos. 5343 and 5344, dated 13th idem, sanction be given to the removal of the following structures built without permission:—

Name of Owner.	Where.
Mr. Mayaji Sayaji Girja	Building at Jairajbhai Peerbhoy Lane.
„ Karsetji Jamshedji	Do. at Mahim Bazar Road.
Bai Kastibai, widow of Laxamon Hira	Do. at Naigam Road.
Mr. Nurudin Jivakhan	Do. at Kamathipura 6th Street."

No. 2293. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 5586, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 2294. *Resolved*: "That the following be *recorded* with reference to the resolution of the Committee, No. 1453, dated 18th May last, and No. 9755, dated 7th January 1891:—Letter No. 5229, dated 10th instant, from the Commissioner, reporting that he has sanctioned the purchase of 100 tons of Davison's West Hartley coal from Messrs. Killick, Nixon & Co., at Rs. 17-8-0 per ton, delivered at the Municipal Workshops and at the Carnac Bunder Night-Soil Depôt."

No. 2295. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 5262, dated 11th instant, and with reference to the resolution of the Town Council, No. 1317, dated 20th November 1885, sanctioning the payment of compensation to Mr. Damodardas

Purbhoodas at the rate of Rs. 15 per square yard in respect of 4·96 yards, or thereabout, of land acquired at No. 17, Agiary Street, sanction be now given to the payment of such compensation to Mr. Maneklal Motilal for himself and his minor brother, Mr. Jamnadass Motilal."

No. 2296. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 5300, dated 11th instant, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Mr. Yeshwantrao Keshavrao Potnis for the recovery of Rs. 368-9-0, being the amount of taxes due by him in respect of property No. 48 (29), G Ward, for the period of second half 1890-91 to the current half-year of 1892-93."

No. 2297. *Resolved*: "That resolution of the Corporation, No. 2091, dated 9th instant, on the question of the proposed provision of a foot-bridge over the G. I. P. Railway at Byculla be referred to the Commissioner for favour of remarks."

Proposed by Bhalchandra K. Bhatawadekar, Esq., seconded by Javerilal U. Yajnik, Esq.—

No. 2298. "That the Health Officer's Report for the first quarter of 1892, be referred to the Commissioner for the purpose of being sent back to the Health Officer for a fuller report embodying his views on the question of house connections and his suggestions in the matter. That copy of this resolution be forwarded to the Corporation with the report."

Carried.

Owing to the absence of Mr. A. G. Viegas, the consideration of his motion on the subject of the condition of roads in the Mandvi Ward was postponed till next week.

In accordance with notice, it was proposed by Bhalchandra K. Bhatawadekar, Esq.—

No. 2299. "That the Commissioner be requested to inform the Standing Committee as to what provision is made for regularly flushing the gullies between houses and what quantity of water is proposed to be used on this work, in the proposals for increasing the supply of water in the City."

The motion was seconded by Javerilal U. Yajnik, Esq., and *carried.*

Proposed by Bhalchandra K. Bhatawadekar, Esq.—

"That the Commissioner be requested to furnish a list of streets supplied with 3″ pipes, showing the population in each street according to the last census."

The motion was seconded by Javerilal U. Yajnik, Esq.

After discussion, Mr. Bhalchandra was allowed to withdraw the motion.

Proposed by Bhalchandra K. Bhatawadekar, Esq.—

"That the Commissioner be requested to furnish a return showing the streets in which new mains for water are to be laid, with their size, the quantity of water each main will deliver daily, and the population of those streets according to the last census."

The motion was seconded by Javerilal U. Yajnik, Esq.

After discussion, Mr. Bhalchandra was allowed to withdraw the words from "the streets" to "their size," and from "and the" to "census."

The motion, as thus amended, was *carried* as follows :—

"That the Commissioner be requested to furnish a return showing the quantity of water each main will deliver daily."

No. 2301.

Read letter No. 5398, dated 13th instant, from the Commissioner, to the Secretary, as under :—

SIR,—With reference to the impending erection of new pumping engines at Love Grove, I have the honor to submit, for the consideration of the Standing Committee and Corporation, whether it will or will not be advisable to take this opportunity of transferring the engine-house and plant to the west side of Worli Hill at a point not far from the present outfall. The present Chief Engineer, Northern Division, to Government, has more than once expressed his opinion that this is the proper site for the pumping station. In his minute appended to the report of the Government Committee which sat last year, on the question of outfall, he wrote as follows:—

"The Worli outfall * * * * has the advantage too of the Worli Hill, which acts as a screen for the city and also to some extent as a chimney, for gases must rise above it before proceeding in the direction of the populated area," and further "One reason why I prefer Worli is, that it would be practicable in that locality to have the pumping station adjoining the reservoirs, and the whole of the works might be on the coast side of the Worli Hill." The weight of Mr. Little's authority will be generally admitted. I should not, however, at this stage bring the suggestion before the Corporation, but for the fact of the extreme difficulty which is being experienced in solving the question of dealing with the sewage of the city during the period (about six months) while the new pumping engines are being substituted

for the existing plant. The intention originally was to remove the present engines and pumps, two at a time, leaving those which remained *in situ* with the help of the 18″ centrifugal to deal with the sewage till two of the new set were erected, but this was based upon the expectation that we should be able to get the new plant up before we had to deal with the full Tansa supply or the monsoon rains. This, owing to the late date at which sanction was accorded to the purchase of the new engines, is now impossible; and as one pair of the present engines with the 18″ centrifugal cannot nearly deal with the sewage which will come down to be lifted, I have been for a long time engaged with the Engineers in endeavouring to devise a temporary scheme of an auxiliary nature, which would enable us to take over the period between the dismantling of the first pair of old engines and pumps and the placing *in situ* of the first pair of new ones. I believe every possible expedient has been considered, and I fear there is no escape from the conclusion that a new engine-house will have to be built, because it will not be possible to disturb the existing engines or any of them until the new ones are ready, not only because they are all required to deal with the sewage, but because it is very doubtful whether the present foundations can safely be touched while any of the present engines are running.

Two alternatives present themselves—the first, to which I have already alluded, is the total abolition of the present site and the transfer of the engine-house to the west side of Worli Hill; the second is the erection of a new engine-house close to and immediately to the north of the present one. The first expedient, which on theoretical grounds is in my judgment the right one, will entail the extension of the main sewer for 2,100 feet and the construction of a new condensing tank. It will cost, and in saying this I include the whole work incidental to the transfer, Rs. 1,60,000 at least. The disadvantages outside the question of cost will be, that the engine-house will be at a great distance from the workmen's chawls, the floor of the engine-house will have to be at some distance below the ground, as otherwise the lift will be seriously increased, and there is an unknown risk of complaint and possible action at law by the residents on Worli Hill, of whom there are several. The Municipality does not forget the law-suit which culminated in the undesired possession of Mr. Varjivandas' bungalow. The suggested transfer might have similar consequences. On the whole, in spite of the reasons in its favor, I do not recommend the transfer to the west of Worli Hill. The alternative, *viz.*, the erection of a new engine and boiler-house to the north of the present ones, will not cost more than Rs. 40,000, made up as follows:—

	Rs.
Cost of engine and boiler houses ...	... 25,000
1,500 square yards of land at Re. 1-8 ...	... 2,250
Extension of sewer	... 10,000
	Rs. 37,250
Add—Contingencies, say, total ...	...Rs. 40,000

The loan already sanctioned by the Corporation (Rs. 4,00,000) is sufficient to meet the cost of the new engines, providing the foundations and fixing them in their places, but not more. A credit, however, amounting to between Rs. 30,000 and 40,000, may be safely taken on account of the four existing engines and boilers, the two centrifugals and the materials of the existing house. On the whole, it does not appear to me that any extra financial provision is at present required if the cheaper scheme be adopted. I think the funds provided or to be in our hands will suffice to meet it. Under these circumstances I submit, for the sanction of the Corporation, the proposal to construct a new engine-house to the north of the present one. Detailed estimates and a tracing will follow this letter with the least possible delay. The matter is urgent, and I would request it may be disposed of as soon as convenient.—I have, &c., H. A. ACWORTH, Commissioner.

No. 2302. *Resolved* : "That the following be printed on the minutes of this day's meeting and brought on for consideration next week :—Letter No. 5398, dated 13th instant, from the Commissioner, on the subject of the erection of a new pumping engine and boiler house at Love Grove.

"That the Commissioner be requested to consult the Health Officer in the meantime as to the proposed position of the new pumping station."

No. 2303. *Resolved* : "That, as applied for by the Commissioner in his letter No. 5390, dated 13th instant, sanction be given, under section 92 (*b*) of the Municipal Act, to the sale by public auction, by advertisement or in any other manner which may be found suitable, the following dead-stock belonging to the Fire Brigade, which has been condemned by the Commissioner, *viz.* :—

4 Steamers with appurtenances.
2 Manuals ditto.
3 Fire Escapes."

No. 2304. *Resolved* : "That the following be forwarded to the Commissioner for report, and that the applicants be informed accordingly :—Memorandum from the Municipal Secretary, forwarding petition, dated 6th instant, addressed to the Corporation by the owners of houses and residents of Duker Gully, complaining of insufficient supply of water, the condition of the road, street lighting and nuisance from the stables thereat."

Resolved : "That the following be laid on the table :—

No. 2305. Letter, dated 10th instant, from Messrs. Ardaseer Framji Moos and Nanabbai R. Ranina, reporting that they have audited the weekly statement of receipts and disbursements at the end of each week for the month of May last and compared them with the ledgers and journals and found them correct. Forwarding summary and statements of their scrutiny of accounts."

The further consideration of the report of the Sub-Committee on the proposed improvement of the distribution of water was postponed till next week.

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 12th June 1892.

Resolved : "That the following be *recorded* :—Memo-

No. 2306. randum No. 5511, dated 14th instant, from the Commissioner, reporting that no house or portions of houses fell during the month of April 1892."

Resolved : "That the following be *recorded* :—Memo-

No. 2307. randum No. 5462, dated 14th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 11th idem."

Resolved : "That the following be forwarded to the

No. 2308. Commissioner for favor of report and that the applicant be informed accordingly :—Memorandum from the Municipal Secretary, forwarding petition, dated 14th instant, addressed to the Corporation by Mr. Noor Mahomed Gangjee, complaining of the illicit manufacture of tallow and the adulteration of ghee with tallow."

Resolved : "That, as applied for by the Commissioner,

No. 2309. in his letter No. 5597, dated this day, the Corporation be recommended to sanction an expenditure of Rs. 2,200 from savings in the grant for materials, water works budget, to meet the cost of providing a galvanized iron-sheet shed with curved roof and rolled beam standards for the purpose of protecting the pipe cutting machines in Chinchpookli Water Works Stores."

* *See* Appendix B.

Resolved: "That the following be *recorded*:—Letter No. 5594, dated this day, from the Commissioner, reporting that he has sold the right of cutting grass from the newly acquired ground at the Victoria Gardens for 4 months from 1st June to 30th September 1892 to one Narayen Vithoba for Rs. 185."*

No. 2310.

Read the following:—

No. 7680 OF 1892-93.

BOMBAY, 14*th June* 1892.

TO THE COMMISSIONER.

SIR,—I have the honor to forward the following results of examination of the Tulsi, Vehar and Tansa Waters for submission to the Standing Committee for the current month:—

Sample of unfiltered Tulsi water obtained from the Inlet Well, Malabar Hill Reservoir, on the 1st June 1892.

	Parts per million.
Free Ammonia	·10
Albumenoid Ammonia	·13

Sample of filtered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 1st June 1892.

	Parts per million.
Free Ammonia	·01
Albumenoid Ammonia	·07

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir, on the 1st June 1892.

	Parts per million.
Free Ammonia	Trace.
Albumenoid Ammonia	·08

Sample of Tansa water taken from an hydrant on the 27″ main in Arthur Road, on the 2nd June 1892.

	Parts per million.
Free Ammonia	·01
Albumenoid Ammonia	·06

I have, &c.,
T. S. WEIR, Health Officer.

No. 5575 OF 1892-93.

BOMBAY, 15*th June* 1892.

THE MUNICIPAL SECRETARY.

Forwarded to the Standing Committee for information.

H. A. ACWORTH,
Commissioner.

Resolved: "That memorandum No. 5575, dated this day, from the Commissioner, be *recorded*."

No. 2311.

* Last year the sale realized Rs. 255 for 6 months.

BOMBAY, 22*nd June* 1892.

AT the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner; the Deputy Executive Engineer, Water Works; and the SECRETARY.

The minutes of the meeting held on the 15th instant, were signed.

No. 2602. *Resolved* : "That the following be *recorded* :—Government Resolution No. 2002, General Department, dated 16th instant, appointing Mr. R. G. Oxenham, M.A., member of the Committee, *vice* Mr. G. Cotton, resigned."

No. 2603. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. James Simpson & Co., Ld., for the supply of new pumping engines and boilers for the Love Grove Pumping Station; (2) with Mr. Sorabji Jamsetji for winding and repairing Municipal clocks during 1892-93; (3) with Messrs. Heptula Sheik Adam & Co., for the supply of two thousand cases of kerosine oil at the rate of Rs. 3-12-6 per case; and (4) with Messrs. Killick, Nixon & Co., for the supply of 100 tons colliery screened Davison's West Hartley coal at the rate of Rs. 17-8-0 per ton.

The seal was also affixed (1) to 5 attested duplicate debentures of the Municipal loan of 1878, Nos. 2286-88 and 2290-91, of Rs. 500 each; and (2) to 25 sub-divided debentures of the Tansa Water Works loan, Nos. 1651-1700, of Rs. 1,000 each.

No. 2604. *Resolved* : "That, as applied for by the Commissioner, in his memoranda No. 5667, dated 16th instant, and Nos. 5769, 5770, 5771, 5772 and 5773, dated 17th idem, sanction be given, under section 351 (2)

of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.	Where.
Mr. Rungildas Bhookundas ...	Building at DeLisle Road.
Bai Eshi Kristy	Do. at Kamathipura 14th Street.
Mr. Dadabhoy Dhunjibhoy ...	Do. at Suparibag Road.
„ Vithal Budhaji Gunner ...	Do. at Mahim Bazaar Road.
„ Rustomji Navroji ...	Do. at Chundanwady Ropa Lane.
„ Rambhat Mahadewji ...	Do. at Warli Road, near Love Grove Pumping Station."

No. 2605. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 6279, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 2606. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 5932, dated 18th instant, sanction be given to the payment of bills amounting to Rs. 29,698-12-11, for extra works done by Messrs. Walsh, Lovett, Mitchell & Co., the contractors for the Tansa duct works, as ordered by the Executive Engineer for Tansa, and at the rates duly sanctioned by the Commissioner. The charge to be met from the provision of Rs. 1,50,000, made in the revised estimates for further payments to the said contractors, including extras."

No. 2607. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 6102, dated 20th instant, sanction be given to the conversion of the bonds which form the amount of deposit of Messrs. Walsh, Lovett, Mitchell & Co., the contractors for the Tansa duct works, into cash whenever the Municipality are called upon to do so, the proceeds being placed to the account of Messrs. Walsh's deposit in connection with their contract, and the difference realised by the premium, if any, being handed over to the Chartered Bank of India, Australia & China, as requested by Messrs. Walsh."

No. 2608. *Resolved* : "That, as applied for by the Commissioner, in his letter No 6178, dated 21st instant, and in conformity with the Government of India's notification No. 2290, dated 6th idem, Finance and Commerce

Department, sanction be given to the Municipal Commissioner's arranging with the Bank of Bombay for the conversion into 4 per cent. Government paper of Rs. 25,000, 4½ per cent. paper held by the Municipality, under the terms of contracts with Messrs. Richardson & Cruddas (Rs. 20,000) and with the Bombay Telephone Company (Rs. 5,000). All Bank charges for the transfers to be borne by the said contractors."

No. 2609. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 5783, dated 17th instant, and in lieu of the resolution of the Town Council, No. 2636, dated 4th July 1888, sanctioning the payment of compensation to Messrs. Bhimji Hurriram and others in respect of 336·19 yards, or thereabout, of land acquired for street improvement purposes at Chikalwadi, sanction be now given to the payment of such compensation to Mr. Vithaldas Ramdas."

No. 2610. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 5850, dated 17th instant, and with reference to the Committee's Resolution No. 1453, dated 18th ultimo, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 6 tons, 17 cwts. 1 qr. of Powell's Duffryn Cardiff coal, in addition to and at the same rates and on the same conditions as those sanctioned in the said resolution."

No. 2611. *Resolved*: "That the following be *recorded*:—Letter No. 5702, dated 16th instant, from the Commissioner, reporting, under Rule XVI, section C., Chapter I of the By-laws, that he has appointed Mr. W. C. Bush as a Sub-Inspector in the Health Department on a salary of Rs. 50 per mensem, although he is over 35 years of age, the special reasons for appointing him are, that he is a fit man for the work and possesses good certificates, and that he will not be allowed to contribute to the Pension Fund."

Statement of Houses or Portions of Houses which fell during the month of May 1892.

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of *Building.*	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties. Persons injured.	Casualties. Persons killed.	Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	Remarks
												Rs.			
1	A	30-34	Kavasji Patel Street.	Bai Jerbai, widow of Hirjibhai Rastamji Patel.	House ...	Nil.	1892. 28th May	Old ...	Portion of north wall.	Nil.	Nil.	50	Nil.	Nil.	
2	„	123	Hornby Road	Bai Perozebai ...	Do. ...	„	31st May	Do. ...	Portion of east wall.	Nil.	Nil.	70	„	„	

No. B3054 of 1892-93.

Forwarded to the Municipal Commissioner.

JAMES W. SMITH,
Acting Executive Engineer, Municipality.

15*th June* 1892.

Considered the following :—

ROYAL ASIATIC SOCIETY LIBRARY

No. 5774 of 17th June 1892.

Forwarded to the Standing Committee for information.—H. A. ACWORTH, Commissioner.

Resolved : "That memorandum No. 5774, dated 17th instant, from the Commissioner, forwarding a statement of houses or portions of houses which fell during the month of May 1892, be *recorded.*"

No. 2612.

In accordance with notice, it was—

Proposed by A. G. Viegas, Esq.—

"That the attention of the Municipal Commissioner be drawn to the unsatisfactory condition of roads in the Mandvi Ward, and that he be requested to state whether it is possible to put them in order from the current year's budget provision. Should, however, the budget grant be insufficient, the Standing Committee will be prepared to consider the estimate with a view to make the necessary recommendation to the Corporation for sanction."

No. 2613.

The motion was seconded by Abdalla M. Dharamsi, Esq., and *carried.*

In accordance with notice, it was—

Proposed by Abdalla M. Dharamsi, Esq.—

"That the Municipal Commissioner be requested to obtain and submit to the Committee, as early as practicable, the opinion of the Advocate General on the following question, *viz.* :—Whether the Standing Committee has the right to call for reports from the Commissioner, and, through him, from other Municipal officers—(1) on matters falling within the powers and functions of the Committee ; (2) on matters which come before the Committee for consideration, disposal or report, either on reference by the Corporation or at the instance of the Commissioner ; and (3) generally as to the right of the Standing Committee to call for reports, information, returns, &c., from the Commissioner and other Municipal officers."

No. 2614.

The motion was seconded by K. M. Shroff, Esq., and *carried.*

In accordance with notice, it was—

Proposed by Bhalchandra K. Bhatawadekar, Esq.—

"That the Commissioner be requested to arrange for the replacement of three pipes of the 32″ Vehar main on the line between Vehar and Kurla, where the main is reported to be corroded and unserviceable for a length of 7,000 feet, and which on that account has been recom-

mended to be renewed ; to enable the Standing Committee to ascertain by a personal examination the condition of the pipes."

The motion was seconded by K. M. Shroff, Esq.

After discussion, the motion was *withdrawn.*

Proposed by Javerilal U. Yajnik, Esq., seconded by Grattan Geary, Esq.—

No. 2615. "That letter No. 5398, dated 13th instant, from the Commissioner, be forwarded to the Corporation with the recommendation that sanction be given (1) to the expenditure of Rs. 40,000, to meet the cost of erecting a new engine and boiler house at Love Grove to the north of the present pumping station, and (2) to advances being made, not exceeding that sum, from surplus cash balance, to be recovered from the sale proceeds of the four existing engines and boilers, the two centrifugal pumps and the materials of the existing pumping station."

Carried.

After discussion, it was agreed that the further consideration of the report of the Sub-Committee on the proposed improvement of the distribution of water, be postponed till next week.

No. 2616. *Resolved* : "That the following be forwarded to the Commissioner for disposal, and that the applicant be informed accordingly :—Letter, dated 16th instant, from Mr. Ebrahim Vallibhai Telly, on the subject of the transfer of his property in the Assessment book."

No. 2617. *Resolved* : "That the following be forwarded to the Commissioner for report, and that the applicant be informed accordingly :—Memorandum from the Municipal Secretary, forwarding petition, dated 20th instant, addressed to the Corporation by Mr. Gunput Bhaisett, complaining of the bad condition of certain of the roads in Mahim."

The following return was read and *recorded* :—

Return of fires at Lady Jamsetji Road (Mahim), Abdul Rahimon Street and Dongri Street, forwarded with the Commissioner's memorandum No. 5366, dated 13th June 1892.*

* *See* Appendix C.

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 19th June 1892.

BOMBAY, *29th June* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA K. BHATAWADEKAR, Esq., L.M. ; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; KAIKHOSRO N. KABRAJI, Esq. ; K. M. SHROFF, Esq. ; R. G. OXENHAM, Esq., M.A. ; A. G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner ; the DEPUTY EXECUTIVE ENGINEER, Water Works ; the CHIEF ACCOUNTANT ; and the SECRETARY.

The minutes of the meeting held on the 22nd instant, were signed.

No. 2959. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Latham & Co., for the supply of street name-plates ; (2) with Messrs. John Fleming & Co., for the supply of certain Fire Brigade appliances ; (3) with Messrs. John Fleming & Co., for the supply of 7 road-scraping machines ; (4) with ditto, for the supply of 7 road-sweeping machines.

The seal to be also affixed to deeds of agreement with Mr. Dawoodbhoy Ebrahim, for the hire of his chawls situated at Stable Street, Jairajbhoy Street and Bapty Road, occupied by biggaries of the Health Department, for a period of 5 years, from 1st March 1892, at the rates of Rs. 242, Rs. 100 and Rs. 47 per month, respectively.

The seal was also affixed (1) to deed of agreement (in duplicate) between the Hon'ble Mr. Fazulbhoy Visram and Mr. Heerjeebhoy Jamal, trustees of Mr. Hassambhoy Visram ; and the Corporation, securing to the Municipality the right to acquire at any future time the set-back of property at Nos. 123-127, Samuel Street, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate

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* *See* Appendix B.

of Rs. 100 per square yard, for any land shown on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by the said trustees by reason of such acquisition; and (2) to deed of agreement (in duplicate) between Bai Faizbaksh binte Hoosseinbaksh and the Corporation, securing to the Municipality the right to acquire at any future time the set-back of property at Nos. 223-243, Parel Road (Bhendi Bazar), without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 25 per square yard, for any land shown on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by her by reason of such acquisition.

The seal was also affixed to three attested duplicate debentures of the Tansa Water Works loan, Nos. 683, 782 and 783, of Rs. 500 each.

No. 2960. *Resolved*: "That, as applied for by the Commissioner, in his memoranda Nos. 6586, 6587 and 6588, dated 25th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.		Where.
Mr. Dharamdas Devidas ...	... Building at	Nos. 153-160, Parel Road.
„ Nathoo Valji	... Do. at	Lady Jamsetji Road.
„ Venkooji Nursooji ...	... Do. at	Kamathipura 13th Street."

No. 2961. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 6860, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 2962. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 6596, dated 25th instant, sanction be given, under section 172 (1) of the Municipal Act, to the charging of Rs. 6-6-0 per month for Halalkhor service, to the G. I. P. Railway Company, in respect of their goods station at Colaba."

No. 2963. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 6488, dated 24th instant, the Corporation be recommended to sanction the writing off of Rs. 1,021-4-9 from the live-stock return of the Fire

Brigade Department, being the book-value of one mare that died on 23rd April 1892, from malarial fever accompanied with disease of the liver and spleen ; and the difference between the book-value and sale-proceeds of one horse sold on account of chronic disease of the coronets."

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 6123, dated 21st instant, and with reference to the Standing Committee's resolution No. 1063, dated 7th May 1890, sanction be given to the payment, during the current year as occasion arises from time to time, of overtime wages to certain workmen of the Water Works staff at the rates hitherto paid, the cost to be debited to Water Works establishment, section I, maintenance, Engineer's Budget.

No. 2964.

" That sanction be also given to the payment of similar wages to the Workshops' labour staff, to the debit of the various grants for which the charges may be incurred."

Resolved : " That the following be *recorded* :—Memoranda Nos. 6122 and 6678, dated 21st and 27th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the weeks ending 18th and 25th idem."

No. 2965.

Considered the following :—

No. 1737W OF 1892-93.

BOMBAY, 28*th June* 1892.

To THE COMMISSIONER.

SIR,—I have the honour to report that at 1 A.M. on the 15th instant, the 24" main burst in Parel Road, a few yards south of Arthur Road.

2. The repairs were completed and water turned on again on the 16th instant, at 4 P.M.

3. The original pipe laid in 1885 burst some years ago : the failure on this occasion was of the pipe used to replace the original one. Sample of the iron is sent herewith.

4. The cause of failure was the resting of the pipe upon rock. The failure occurred 18 hours after the Tansa water, with its higher than Vehar pressure, had been turned into the pipe. I think it is probable that the pipe, although sound, had been for some time under strain on account of the rock underneath, and the higher internal pressure had the effect of causing rupture.

5. The rock has now been cut away for about 9 inches under the pipe.—I have, &c.,

S. TOMLINSON, M. INST. C. E.,
Deputy Executive Engineer,
in Charge Water Works.

No. 6802 *of* 28*th June* 1892.

Forwarded to the Standing Committee with sample of pipe.
H. A. ACWORTH, Commissioner.

No. 2966. *Resolved* : "That memorandum No. 6802, dated 28th instant, from the Commissioner, reporting a burst on the 15th idem of the 24" Vehar water main, Parel Road, be *recorded*, and the sample of the broken pipe be placed on the table."

No. 2967. After discussion it was agreed that the following report be submitted to the Corporation with reference to their resolution No. 2091, dated 9th instant :—

"*The proposed footbridge over the G. I. P. Railway at Byculla overbridge.*

"The Standing Committee beg to report, with reference to the Corporation's resolution No. 2091, dated 9th instant, that the proposed footbridge at Byculla will, if constructed, be entirely on Municipal ground and that the construction of the bridge was recommended by the Overbridge Committee appointed by Government under its resolution No. 449 (Railway Department) of 1890, (see Vol. XIV of the Record, page 281-5). As there is a very considerable traffic under the Railway at this point by the side of the Municipal drain, a footbridge would no doubt be a great relief and be largely used.

"If the building of the bridge is approved by the Corporation, the Committee will provide for the estimate cost of construction in the Budget estimates for next year.

"The Railway Company having their own approaches on both sides and a footbridge over their line, it does not appear that they would derive any benefit from the erection of the proposed footbridge."

29*th June* 1892.

No. 2968. *Resolved* : "That letter No. 6530, dated 24th instant, from the Commissioner, together with its accompaniments on the subject of the adulteration of ghee with tallow be forwarded to the Corporation with reference to their resolution No. 2486, dated 16th idem, and with a recommendation that Mr. Noor Mahomed Gangji be referred, as per the terms of that resolution to the Commissioner."

133798

Read the following :—

No. 6498 OF 1892-93.

BOMBAY, 24*th June* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—With reference to the various petitions forwarded to me under Standing Committee's Resolutions Nos. 1229 and 1668 of 11th ultimo and 1st instant respectively, I have the honour to report that, if the petitioners were, as they allege, summarily removed from the footpath on which they had been accustomed to sell boots and shoes (and as to this we have only their own statement), it seems to me that the Police exceeded their authority. Neither I nor the Solicitors can find any law bearing on the question except section XIX, sub-section 12, Act 48 of 1860.

This sub-section quoted in the margin presupposes a definition of limits within which trades are not to be carried on, and the sanction of the Local Government to such definition, and then goes on, not to authorize summary action, but to provide a penalty (I presume on conviction by a magistrate) for infraction of the order. Whether this view of the law be correct or not, I think that, in the circumstances of the present case, the obstruction being one of old standing and on a footpath belonging to the Municipality, a reference to myself might have been expected to precede the action of the Police, especially having regard to the Municipal Commissioner's powers under Section 313 of the Municipal Act. I do not, however, think it worth while now to move in the matter, and as far as I can see no Municipal authority excepting myself, has any power to do so, because if a reference had been made to me I should certainly have favoured the clearing of the footpath. I recommend the Standing Committee to inform the petitioners, that the question is entirely one for the Police and Municipal Commissioners and that their occupation of the footpath was contrary to law. The Police Commissioner suggests to me that the petitioners be referred to him and says that the question is entirely one of Police administration, but I doubt whether this view is correct. I think obstructions on footpaths concern the Municipality as well as the Police, but it would be most undesirable to raise any formal question on this point, as we depend so much on the Police and they are always so ready to assist in enforcing the provisions of the Municipal Act.—I have, &c.,

"Whoever within such limits as shall be from time to time "defined by the Commissioner of Police with the sanction of the "Local Governments in any public street, road, thoroughfare, or "place of public resort exposes for sale or sets out in or upon "any stall, booth, show board, cask or basket or otherwise any "meat, fish, vegetable, fruit, groceries or any other thing what-"soever so as to cause obstruction in any thoroughfare shall "be liable to a fine not exceeding Rs. 50."

H. A. ACWORTH,
Commissioner.

The further consideration of this letter was postponed till next week.

Proposed by Grattan Geary, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

No. 2969. "That, as applied for by the Commissioner, in his memorandum No. 6724, dated 27th instant, sanction be given to the sale from time to time of Government securities not exceeding Rs. 5,00,000 (five lakhs) in which balances of some of the Municipal loan funds have been invested, to allow of the replacing of advances already made from surplus cash balance or other loan funds on account of loan works in progress, or of meeting further expenditure on account of such works during the course of the year.

"That each transaction of the kind be reported to the Committee within seven days."

Carried.

No. 2970. *Resolved*: "That the following be referred to the Commissioner for favour of remarks :—Letter, dated 23rd instant, from Mr. Saishia R. Naidoo, regarding to the erection of a cattle trough at the junction of Hornby and Paltan Roads."

Considered the following :—

No. 1145 OF 1892-93.

BOMBAY, 25*th June* 1892.

TO THE COMMISSIONER.

SIR,—With reference to the then Town Council's resolution No. 1208, dated 17th November 1886, and the latter portion of their resolution No. 1444 of 22nd December 1886, I have the honor to forward for the information of the Standing Committee the accompanying statement showing the investment of the different Loan and Reserve Fund balances up to 31st March 1892.—I have, &c., SORABJI NAVAROJI COOPER, Chief Accountant.

No. 6670 *of* 27*th June* 1892.

Forwarded to the Standing Committee for information.—H. A. ACWORTH, Commissioner.

Statement showing the Balance of Loan

Particulars.			Amount.		
			Rs.	a.	p.
1. Sinking Fund of the 6 % Loans of 1867-1868—					
Balance on 1st April 1891... ...	Rs. 4,000	0 0			
Less—Amount drawn in 1891-92...	„ 2,500	0 0			
			1,500	0	0
2. 27 Lakhs Drainage and Water Works Loan—					
Balance on 1st April 1891			*Nil.*		
Add—Amount advanced for other works replaced in 1891-92.			48,000	0	0
			48,000	0	0
3. Municipal Building Fund—					
1881			2,50,000	0	0
1882			50,000	0	0
1883-84			20,000	0	0
Interest and Profit up to February 1885			27,310	7	7
1884-85	Rs. 50,000	0 0			
Less expended	„ 800	12 4			
			49,199	3	8
1885-86	Rs. 50,000	0 0			
Less expended	„ 42	6 10			
			49,957	9	2
1886-87			50,000	0	0
1887-88			50,000	0	0
Interest up to March 1887			37,962	8	0
Do. do. 1888	Rs. 13,847	9 11			
Less expended	„ 798	0 0			
			13,049	9	11
Interest and Profit up to March 1889...			55,576	10	10
Do. do. March 1890...			25,083	10	7
Do. do. March 1891...			28,281	13	1
Do. do. March 1892...	Rs. 31,904	15 5			
Deduct.—Stamp charges paid on debentures of the 8 Lakhs Municipal Building Loan	„ 4,000	0 0			
			27,904	15	5
			7,34,326	8	3
Add—Loan raised in 1891-92			8,00,000	0	0
			15,34,326	8	3
Less—Expenditure incurred in 1888-89.	Rs. 90,088	0 0			
Do. do. 1889-90.	„ 96,299	15 10			
Do. do. 1890-91.	„ 2,53,933	5 7			
Do. do. 1891-92.	„ 4,05,987	8 8			
	Rs. 8,46,308	14 1			
Less—Amount advanced from the Municipal General Fund in 1891-92 to be adjusted against the loan in 1892-93	Rs. 1,11,982	5 10			
			7,34,326	8	3
			8,00,000	0	0

and Reserve Funds on 31st March 1892.

How Invested.	Remarks.
Deposited in cash with the Bank of Bombay.	
5 % Municipal Debentures for Rs. 48,000.....=Rs. 48,000 0 0	
5 % Municipale Debentures for Rs. 8 Lakhs .....=Rs. 8,00,000 0 0	

PARTICULARS.	Amount.
	Rs. a. p.
4. 44 Lakhs Sanitary Works Loan—	
Balance on 1st April 1891	6,73,623 10 4
Less—Amount drawn in 1891-92	18,075 0 0
	6,55,548 10 4
5. Tansa Water Works Loan of Rs. One Crore and 47 Lakhs—	
Balance on the 1st April 1891 ... ... Rs. *Nil.*	
Add—Amount raised in 1891-92 ... „ 25,00,000	
	25,00,000 0 0
Deduct—	
Amount drawn in 1891-92	22,35,000 0 0
	2,65,000 0 0
6. 7 lakhs Sanitary Works Loan—	
Balance on 1st April 1891 ... ... Rs. 1,20,000	
Less—Amount drawn in 1891-92 ... „ 1,20,000	
	Nil.
Add—Amount advanced for other Works replaced in 1891-92	1,20,000 0 0
	1,20,000 0 0
7. 12 lakhs Drainage and Water Works Loan—	
Balance on 1st April 1891	5,67,862 8 0
Less—Amount drawn in 1891-92	3,13,818 12 0
	2,54,043 12 0
8. Miscellaneous Works Loan of Rs. 10,08,500—	
Balance on 1st April 1891	5,00,000 0 0
Less—Amount drawn during 1891-92	4,00,375 0 0
	99,625 0 0
9. Agripada House Sullage Water Connections Loan of Rs. 2,48,000—	
Balance on 1st April 1891	*Nil.*
Add—Amount advanced for other works replaced in 1891-92	1,70,000 0 0
	1,70,000 0 0

How Invested.					REMARKS.
4 % Government Paper for Rs. 6,70,000	=Rs.	6,55,548	10	4	
5 % Municipal Debentures for Rs. 2,65,000	=Rs.	2,65,000	0	0	
5 % Municipal Debentures for Rs. 1,20,000	=Rs.	1,20,000	0	0	
4 % Government Paper for Rs. 2,55,000	=Rs.	2,54,043	12	0	
4 % Government Paper for Rs. One lakh	=Rs.	99,625	0	0	
5 % Municipal Debentures for Rs. 1,70,000	=Rs.	1,70,000	0	0	

	Particulars.			Amount.		
				Rs.	a.	p.
10.	35 Lakhs Various Sanitary Works Loan—					
	Balance on 1st April 1891			19,21,058	2	0
	Less—Amount drawn during 1891-92			2,66,222	10	0
				16,54,835	8	0
11.	Tansa Loan Interest Deposit Account—					
	Balance on 1st April 1891			9,56,276	15	0
	Add—Interest realized during 1891-92			31,634	5	8
				9,87,911	4	8
	Deduct—Amount drawn during 1891-92 to pay interest on the Tansa Loan in excess of the fixed Annual Budget Provision			2,36,905	13	11
				7,51,005	6	9
12.	5% Municipal Loans Sinking Fund—					
	Balance on 1st April 1891 ...Rs.	2,89,883	3 4			
	Add—Instalments due during 1891-92 ...Rs.	1,19,050	0 0			
	Interest realized during 1891-92 ... „	15,814	10 5			
		1,34,864	10 5			
				4,24,747	13	9
13.	Municipal Buildings Fire Insurance Fund—					
	Balance on 1st April 1891			6,113	4	5
	Add—					
	Amount set apart for 1891-92 ... Rs.	3,000	0 0			
	Interest realized during 1891-92 ... „	274	8 0			
				3,274	8	0
				9,387	12	5
14.	Surplus Cash—					
	Balance on 1st April 1892			16,77,423	4	0
	Less—Amount drawn during 1891-92			13,98,000	0	0
	Add—			2,79,423	4	0
	Amount advanced during 1891-92 for different works and subsequently replaced			18,12,000	0	0
	Interest and profit realized by the sale of 4 % Government Paper for Rs. 2,69,600			10,936	8	5
				21,02,359	12	5

How Invested.					Remarks.
4 °/₀ Government Paper for Rs. 16,04,100	=Rs.	16,54,835	8	0	
4 °/₀ Government Paper for Rs. 7,13,000	=Rs.	7,11,837	13	0	
Deposited in cash at the Bank of Bombay	„	39,167	9	9	
	Rs.	7,51,005	6	9	
5 °/₀ Municipal Debentures for Rs. 4,24,500	=Rs.	4,24,500	0	0	
Deposited in cash at the Bank of Bombay	„	247	13	9	
	Rs.	4,24,747	13	9	
5 °/₀ Municipal Debentures for Rs. 9,000	=Rs.	9,000	0	0	
Deposited in cash at the Bank of Bombay	„	387	12	5	
	Rs.	9,387	12	5	
5 °/₀ Municipal Debentures for Rs. 18,12,000	=Rs.	18,12,000	0	0	
Deposited in cash at the Bank of Bombay	„	2,90,359	12	5	
	Rs.	21,02,359	12	5	

Resolved: "That statement showing the investments
No. 2971. of the different Loan and Reserve Funds up to 31st March 1891, be *recorded* and printed on the minutes of this day's proceedings."

No. 2972. Considered and *recorded* the following :—

No. 1631 OF 1892-93.

BOMBAY, 22*nd June* 1892.

To H. A. ACWORTH, C.S., Commissioner.

SIR,—I have the honour, as directed in your No. 6126 of the 21st instant, to append a statement shewing the discharging capacities of the different mains recommended in the reports now before the Standing Committee.

2. It will be noted that the fall allowed is 3 feet per mile : this is somewhat less than would be taken in a City where the pressure is very great ; but in our case when the maximum pressure possible as dictated by the geography of the island and district is a very moderate one, it is of great importance that all the works should be laid out to conserve the pressure as far as possible.

3. The quantities are given in total gallons per 24 hours and one-twenty-fourth part of that for the maximum hourly supply. It must be borne in mind, when considering the capacities required for distributing mains, that differing from supply mains, such, for example, as the Tansa main, they are liable to be called upon temporarily to supply a much greater quantity of water than the *average* of the usual supply. On the occasion of a fire, for example, how frequently the supply is deficient because the mains, whilst sufficiently large for the ordinary supply, cannot respond to the full opening of several fire hydrants required for the supply of lines of hose or for the engines. Another consideration to be borne in mind in laying distributing mains is that they must be equal, not only to the maximum draft to-day, but as far as can be foreseen, for the maximum draft fifteen years hence when the population and demand may usually be considered to be likely to have materially increased. In some of the mains under discussion it must, moreover, be remembered that they are liable to be called upon to undertake the supply of other districts than those for which they are primarily provided whenever an accident may disturb the usual arrangements for a supply.—I have, &c., S. TOMLINSON, M.I.C.E., Deputy Executive Engineer, Water Works.

DISCHARGE OF WATER MAINS, THE FALL IN WHICH IS AT THE RATE OF 3 FEET PER MILE.

Calculated from Beardmore's Tables.

Diameter of Pipe.	Proposed Situation.	Total length.	Discharge in Gallons.	
			Per day of 24 hours.	Per hour.
Inches.		Feet.		
48	Elphinstone Road from Dadar Road to Tulsi Pipe Line ...	2,560	16,155,000	673,000
32	Chinchpokli Station to Grant Road	10,800	5,862,600	244,275
32	Along Tulsi Pipe Line, Elphinstone Road, Fergusson Road..	3,850	5,862,600	244,275
24	From Parel Road to Sivri Cemetery Road...	8,200	2,855,700	119,000
18	In various places	...	1,391,400	58,000
12	Ditto	...	504,900	21,000
9	Ditto	...	245,850	10,250

No. 6549 *of* 24*th June* 1892.

Forwarded to the Municipal Secretary with reference to the Standing Committee's resolution No. 2301, dated 15th instant.

H. A. ACWORTH, Commissioner.

Considered the following :—

No. 6302 OF 1892-93. BOMBAY, 22*nd June* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—I have the honour to lay before the Standing Committee and the Corporation a proposal which, I think, is sure to meet with their approval, with a suggestion that Government be addressed upon it with the least possible delay.

2. A reference to page 70 of the Budget for 1892-93 will show the following item :—

Interest and instalment of new Consolidated Tulsi Loan.

Raised—between 1st February 1877 and 31st December 1880.

Term—30 years.

Interest—4½ per cent.

Amount of loan—Rs. 58,40,000.

	Rs.	a.	p.
Balance due on 31st March 1891	46,70,998	3	8
Interest and Sinking Fund payable in 1892-93	3,56,652	4	10

This loan was raised from Government, and consolidated the following loans :—

	Rs.	a.	p.
Tulsi Water Works loan	36,00,000	0	0
Surface Drainage loan	6,00,000	0	0
New Government loan of 15 lakhs—balance.	12,66,304	6	0
Tulsi 4 lakhs loan—balance	3,73,695	10	0
	58,40,000	0	0

The terms of the loan will be found in Bombay Act II of 1880.

3. The Municipality are now able to borrow money in the open market at 4 per cent., and I recommend that Government be applied to for permission to raise a loan at that rate for forty years, sufficient to pay off the remaining balance of this consolidated 4½ per cent. loan. The latter is practically the Tulsi loan. The Government of India have already consented to make the period of repayment of the Vehar debt co-terminous with that of the earlier instalments of the Tansa debt, *i.e.*, sixty years from 1st January 1893. There is no likelihood that they would entertain a proposal to do the same by the loan now suggested, but there would be, I think, no objection to a forty years' term, the same as the period for some of the later Tansa instalments.

4. On a loan of Rs. 43,68,000 for forty years at 4 per cent. the interest and sinking fund would amount to Rs. 2,20,687 per annum, which would afford the Municipality relief to the extent of Rs. 1,36,000 per annum as compared with the present burden on account of the 4½ per cent. consolidated loan.

5. The proposal ought to be laid before Government at an early date, so that their consent may be obtained while the money market remains favourable, and I beg, therefore, that the earliest possible consideration may be given to this letter.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 2973. *Resolved* : " That letter No. 6302, dated 22nd instant, from the Commissioner, be forwarded to the Corporation with the recommendation, that the Commissioner be authorised to apply to the Government of India for sanction to the raising in the open market of a loan of Rs. 43,68,000 for a period of 40 years at 4 per cent. in order to allow of the paying off of the remaining balance due to Government on account of the consolidated loan of 4½ per cent. (raised for a period of thirty years from 1st January 1881)."

After discussion the further consideration of the question of the proposed improvement of the distribution of water was postponed till next week.

In accordance with notice, it was proposed by Bhalchandra K. Bhatawadekar, Esq.—

No. 2974. " That, in future, whenever the bills of the Municipal Solicitors exceeded Rs. 1,000 in amount, they be taxed by the Taxing Master of the High Court of Bombay before payment."

The motion was seconded by Javerilal U. Yajnik, Esq., and *carried*.

The following return was read and *recorded* :—

Return of fires at Arthur Bunder, Pedder Road and Dharavi Road (Mahim), forwarded with the Commissioner's memorandum No. 6019, dated 20th June 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 26th June 1892.

Resolved : "That, as applied for by the Commissioner, in his letter No. 6781, dated 28th instant, sanction be given, under section 172 of the Municipal Act, to a special charge of Rs. 259-3-2 per annum being made against the Wilson College, D' Ward, No. 2446, for halalkhore service rendered to that institution during the year 1890-91." No. 2976.

BOMBAY, *6th July* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.C.M.C., *Chairman*.
ABDULLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C. S., Commissioner; the DEPUTY EXECUTIVE ENGINEER, Water Works; and the SECRETARY.

The minutes of the meeting held on the 29th ultimo, were signed.

The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Palanji Shapurji Mistry & Co., for building a market at Foras Road; (2) with Messrs. Bhedwar & Co., for laying cast-iron pipes in Forbes Street and other places; (3) with Messrs. Vishnu Narsingrao & Co., for works in the construction of pipe sewers and metal ventilating shafts in Parel village; (4) with ditto for works in construction of a storm-water drain in Hornby Road, from the Salvation Army Hall to Bazaar Gate Street; and (5) with Mr. Shankarao Baba Mandrupkar, for the supply of number-plates for houses. No. 3370.

Resolved : "That, as applied for by the Commissioner, in his memoranda Nos. 7108, 7109 and 7110, dated 1st instant, and Nos. 7230 and 7231, dated No. 3371.

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* *See* Appendix C. † *See* Appendix B.

4th idem, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.		Where.
Mr. Limji Manockji Banaji	... Building	at Nesbit Road.
„ Khursetji Jamsetji	Do.	at Mahim Bazaar Road.
Bai Kanbai, widow of Pudamji Dhunji	Do.	at Abdul Rahman Street.
Mr. Pandu Kanu	Do.	at Bhoewada Village, Parel.
„ Palonji Nassarwanji	Do.	near Mahaluxmi Railway Station."

No. 3372. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 7419, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 3373. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 7010, dated 30th ultimo, sanction be given, under section 172 (1) of the Act, to a special halalkhor charge of Rs. 77-12-0 per month being made from the 12th idem against the Bombay Dyeing and Manufacturing Co., Ld., G Ward, Nos. 2642 to 2645, Mahim Agar."

No. 3374. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 7236, dated 4th instant, sanction be given to the transfer of Rs. 98-11-4 from savings in section 3, repairs to machinery, B, maintenance of Love Grove Pumping Station, to section I, establishment, B, maintenance of ditto, to meet the wages of an extra cooly employed to attend to the oiling of the centrifugal pumps and portable engine."

No. 3375. *Resolved* : " That the following be *recorded* :—Letter No. 7014, dated 30th ultimo, from the Commissioner, reporting that he has sanctioned the purchase of flower-pots for the Victoria Gardens for the current year, from one Nagah Luxmon, as per statement forwarded with the letter, *viz.*, 35,000 pots, costing Rs. 1,464-6-0."

No. 3376. *Resolved* : " That the following be *recorded* :—Letter No. 7138, dated 1st instant, from the Commissioner, reporting, as required by section 92 (*a*) of the Act, that as Messrs. Hasanalli Hakimji & Bros. and Essaji Mahomedalli & Co. have not removed the whole of the materials sold to them from the Blue Mills premises, which

they stipulated they would do by the 17th ultimo, and as it appears from the quantity still lying on the ground that they will not be able to do so for some time to come, they have been requested to pay rent at the rate of Rs. 65 per month for the ground occupied by the materials, to which they have agreed."

No. 3377. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 7139, dated 1st instant, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 300 tons of Dutton's Hartley coal at Rs. 16-8-0 per ton delivered at the Municipal Workshop Stores.

"That under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as similar arrangements sanctioned by the Committee's resolution No. 9755, dated 7th January 1891, for the purchase of coal during the current year, have been advantageous to the Municipality."

No. 3378. *Resolved* : "That the following be *recorded* :—Letter No. 7140, dated 1st instant, from the Commissioner, reporting that he has sanctioned the purchase of a Fire Brigade brake from Messrs. Simpson & Co., of Mount Road, Madras, at a cost of Rs. 1,543-14-0. The amount to be met out of the budget provision of Rs. 2,500 for the purpose."

No. 3379. *Resolved* : "That the following be *recorded* :—Letter No. 7232, dated 4th instant, from the Commissioner, reporting the sale of the following rights :—(1) cultivating *singodas* in the Gopar Dam and Mehar Tank, Pawai, for 6 months, from the 30th ultimo, to one Shivnarayen Shanker, for Rs. 10 ; (2) cultivating rice on two acres of Municipal land near Pawai engine-house to one Mr. Mahomed Meghji, for Rs. 16 for the current year."*

No. 3380. *Resolved* : "That the following be *recorded* :—Letter No. 7253, dated 4th instant, from the Commissioner, reporting that he has sold the following rights for cutting grass for the current year :—(1) about half an acre slope of reservoir and two acres of rough ground at the Malabar Hill Reservoir, to one Govind Rama, for Rs. 39 ; (2) about three-fourths of an acre slope at the Bhandarwada Reservoir, to one Vithabai, for Rs. 42."†

* This was the first occasion on which the rights were sold.
† Last year the sales realized Rs. 12 and 30 respectively.

Considered again petition from shoe-dealers complaining that they are prevented from selling shoes in the vicinity of the Crawford Markets.

Proposed by Abdalla M. Dharamsi, Esq., seconded by A. G. Viegas, Esq.—

No. 3381. "That the Municipal Commissioner be requested, in consultation with the Police Commissioner, to consider the desirability of framing some rules whereby, under permits issued by the Municipal Commissioner at a reasonable fee, the shoe-dealers hitherto sitting on the foot-path near the Crawford Market, or such of them as may not be considered objectionable, may be allowed to carry on their business as hitherto."*

Carried, by 8 votes *against* none.

No. 3382. *Resolved*: "That the following be *recorded*:—Memorandum No. 6741, dated 28th ultimo, from the Commissioner, reporting, with reference to the resolution of the Committee No. 4484, dated 3rd October 1888, the transfer, on the 23rd idem, of Rs. 1,00,000 from the Surplus Cash Deposit Account to the Municipal General Fund Pass Book."†

No. 3383. *Resolved*: "That the following be forwarded to the Commissioner for disposal and that the applicant be informed accordingly:—Letter, dated 28th ultimo, from Mr. Abdul Hoosein Moolla Calimoodin and others, complaining that, in consequence of the Municipal sweepers neglecting to clean the cesspool on their properties at Fergusson Road, a nuisance is caused thereby."

Considered again letter, dated 30th May 1892, from Mr. Nana Moroba, stating that he has been served with a notice by the Executive Engineer, Drainage, for the removal of the 6″ × 6″ stoneware gully-traps from his property at Girgam and the replacing of them by two new ones. Contending that as the work was executed under the supervision of the Municipality, any defects in it must be rectified by them.

No. 3384. *Resolved*: "That, in reply to his petition, dated 30th ultimo, Mr. Nana Moroba be informed that the Municipal Commissioner has given orders for the replacing of the gully-traps in question at the cost of the Municipality."

* See Proceedings of the Standing Committee, dated 29th June 1892.

† The balance remaining to the credit of the above deposit account, after effecting the transfer, amounts to Rs. 19,76,853 11-2 (Rs. 1,69,853 11-2 in cash and Rs. 18,07,000 in 5 per cent. Municipal bonds at par).

Considered again the report of the Sub-Committee, dated 26th May last, on the proposed improvement of the distribution of water.

Proposed by Abdalla M. Dharamsi, Esq., seconded by Grattan Geary, Esq.—

"That the report of the Sub-Committee appointed to report on the proposed improvement of the distribution of water be approved and adopted, with the alteration that an 18″ main be substituted for a 24″ main from Parel Road to Sewri Cemetery Road, and that the same be forwarded to the Corporation as the report of the Committee, with the recommendation that the Corporation sanction the scheme as proposed; as also the raising of Rs. 15,00,000 provisionally entered in the budget for 1892-93, as the cost of these works."

Amendment, moved by K. M. Shroff, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

"That the Commissioner be requested to report on the question of pumping Vehar water into the Tansa duct, and on the relative advantages or disadvantages of this project as compared with that of laying a steel main from Vehar to Kurla as recommended in the Sub-Committee's report, dated the 26th May 1892. That an estimate of the cost of the pumping scheme be submitted.

No. 3385.

"That the Commissioner be also requested to submit an estimate of the cost of—

"(1) 18″ main from Chinchpokli to Grant Road;
"(2) 18″ main from Parel Road to Sewri Cemetery Road;
"(3) 12″ main from do. do. ;
"(4) 12″ main from Kalachowki Road to Bhundarwada;
"(5) 9″ main from do. do. ;
"(6) The separate cost of each of the mains mentioned under heads 5-9 of the Commissioner's letter No. 1565 of 1892-93, dated 25th April 1892.

"That the consideration of the Sub-Committee's report be in the meantime postponed."

On a division, there were 5 votes *for* and 5 votes *against* the amendment. The Chairman then voted in favour of the *amendment* and it was *carried*.

The following return was read and *recorded* :—

Return of fires at Chinch Bunder (Frere Road) and Kennedy Bridge Road, forwarded with the Commissioner's memorandum No. 7228, dated 4th July 1892.*

* *See* Appendix C.

The following statement * was laid on the table:—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 3rd July 1892.

Considered the following :—.

No. 7227 OF 1892-93.

BOMBAY, *4th July* 1892.

To THE MUNICIPAL SECRETARY.

SIR,—I have the honour to forward a copy of letter from myself to Government No. 555, dated 7th April 1892, and of the Government Resolution thereon, and request permission of the Corporation to address to Government the letter and draft notification, of which copies are enclosed, with a view to raise the loan when required with the sanction of the Standing Committee at 4 per cent. instead of 4½ per cent.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 555 OF 1892-93.

BOMBAY, *7th April* 1892.

To THE CHIEF SECRETARY TO GOVERNMENT,

General Department.

SIR,—With reference to Government Resolution No. 1023 of 29th ultimo, and previous correspondence, I have the honour to ask whether there would be any objection to the loan referred to being raised at 4 instead of 4½ per cent., the advertised rate of interest. In some former loan applications (*vide* preamble to Government Resolution No. 3061, of 22nd August 1883, General Department), it was customary to give alternative rates of interest 4, 4½, or 5 per cent. to meet the contingencies of the money market, and I regret that I did not adopt that course on the present occasion, as there seems good reason to believe that we can raise the money we require at less than 4½ per cent. I may point out to Government that as the loan if raised at 4 per cent. will of course entail a smaller burden on the Municipality, there can be no possible interference with the essential terms of the advertisement, as the security will be better instead of worse than that advertised. It is not advisable to incur the trouble and delay attendant on advertising afresh, but if Government see no objection to the loan being placed at 4 per cent. if possible, I should be obliged by being so informed.—I have, &c.,

H. A. ACWORTH, Commissioner.

Loans: Raising of a loan of Rs. 4,50,000 by the Bombay Municipality for the construction of quarters for the Fire Brigade.

No. 2164.

General Department.

BOMBAY CASTLE, 20*th June* 1892.

Letter from the Municipal Commissioner for the City of Bombay, No. 555, dated 7th April 1892, inquiring, with reference to Govern-

* *See* Appendix B.

ment Resolution No. 1023, dated 29th March 1892, whether there would be any objection to the loan referred to therein being raised at 4 instead of at 4½ per cent., the advertised rate of interest; and making remarks.

Letter from the Assistant Secretary to the Government of India in the Department of Finance and Commerce, No. 2501, dated 14th June 1892 :—

"I am directed to acknowledge the receipt of your letter No. 1656, dated the 20th May 1892, with which was forwarded copy of a letter from the Municipal Commissioner for the City of Bombay, enquiring whether the loan of 4½ lakhs for the construction of quarters for the Fire Brigade in the City of Bombay, authorized in the letter from this Department No. 1039, dated 11th March 1892, could now be raised at 4 per cent. instead of at 4½ per cent. as specified in the application published in the *Bombay Government Gazette* under Rule 8 of the rules under the Local Authorities Loan Act without observing afresh all the formalities required by those rules. The Government of Bombay consider that the publication of a fresh application specifying the lower rate of interest is not necessary, but that the sanction of the Government of India to the proposed reduction in the rate of interest is all that is required.

"2. In reply I am directed to say that though the Government of India agrees on thinking that the formalities required by the rules under the Local Authorities Loan Act are unnecessary in this case, it is considered desirable that the alteration in the rate of interest should be duly notified to the public. The Governor-General in Council accordingly sanctions the issue of invitations to tender for the loan at the rate of 4 instead of 4½ per cent., subject to publication in the local official *Gazette* for a month of a brief notification varying the terms of the original application as regards the rate of interest."

RESOLUTION.—Copy of the letter from the Government of India should be forwarded to the Municipal Commissioner for the City of Bombay for information and guidance.

W. L. HARVEY,
Under-Secretary to Government.

To the Municipal Commissioner
for the City of Bombay.

No. OF 1892-93.
BOMBAY, 1892.

To THE CHIEF SECRETARY TO GOVERNMENT,
General Department.

SIR,—With reference to Government Resolution No. 2164 of the 28th instant, General Department, forwarding a copy of the Government of India's No. 2501 of the 14th idem, in the Department of Finance and Commerce, I have the honour to forward herewith for

your approval a draft of the notification to be published in the local *Government Gazette* as desired by the Government of India regarding the variation in the rate of the interest to be paid to the public on the loan of Rs. 4,50,000 for the construction of quarters for the Fire Brigade, the raising of which was sanctioned in Government Resolution No. 1023, dated 29th March 1892, General Department.—I have, &c.,

Municipal Commissioner.

MUNICIPAL COMMISSIONER'S OFFICE,
BOMBAY, 1892.

With regard to paragraph 5 of the statement attached to the application of 12th September 1891, from the Municipal Commissioner for the City of Bombay, for the sanction of Government to the raising of a loan of Rs. (4½) four and a half lakhs from the public for the construction of quarters for the Fire Brigade, which was published in the *Bombay Government Gazette* of 31st December 1891, page 1049, it is hereby notified (1) that interest on the loan will be paid half-yearly at 4 per cent. per annum as sanctioned in Government Resolution No. 2164 of 28th June 1892, General Department, instead of at 4½ per cent. per annum as originally notified; (2) that the annual amount of interest to be so paid half-yearly will amount to Rs. 18,000 instead of Rs. 20,250; and (3) that the annual Sinking Fund Instalment on the Loan will be Rs. 8,100* instead of Rs. 7,450.

Municipal Commissioner
for the City of Bombay.

No. 3387. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 7227, dated 4th instant, and with reference to their resolution No. 6258, dated 3rd September 1891, the Corporation be recommended (1) to sanction the raising of a loan of Rs. 4,50,000 at 4 per cent. interest per annum, (as authorised by the Government of India in its letter to the Government of Bombay No. 2501 (Finance and Commerce), dated 14th June 1892, for the cost of providing Fire Brigade quarters, instead of at 4½ per cent. as sanctioned in the Corporation's resolution as above; (2) to authorise the Commissioner to address the Government in terms of letter now submitted and to forward therewith the draft notification also submitted; (3) that the previous sanction of the Standing Committee be obtained to the raising of the loan."

* The actual Sinking Fund Instalment amounts to Rs. 8,024, but Rs. 8,100 have been entered to leave a margin for premium for the purchase of 4 per cent. Municipal Debentures from the Market.

No. 3388. *Resolved* : " That, as applied for by the Commissioner in his letter No. 7310, dated 5th instant, sanction be given to the payment to Mr. Tomlinson, Deputy Executive Engineer, Water Works, proceeding on privilege leave, of his pay up to the day of his departure."

No. 3389. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 7265, dated 4th instant, the Corporation be recommended to grant a donation of Rs. 250 to the widow of the late labourer Dianu Kondee, who died from burns caused by an explosion of gas in the Queen's Road sewer on 15th April last. The amount to be met from the grant for pensions, gratuities and compassionate allowances during the current year."

Considered the following :—

No. 1251 OF 1892-93.

BOMBAY, *4th July* 1892.

To THE COMMISSIONER.

SIR,—With reference to the Standing Committee's Resolution No. 2969, dated the 29th ultimo, I have the honour to report, for the information of that body, that 4 per cent. Government Paper for Rs. (2,20,000,) two lakhs and twenty thousand only, belonging to the following deposit accounts, were sold on the 30th ultimo at 107$\frac{3}{8}$ per cent. The original cost price has been noted against each.

Particulars.	Amount of paper sold.	Cost price.	
	Rs.	Rs.	Rs.
(1) 44 Lakhs Sanitary Works Loan Deposit account ...	50,000	{ 97 / 97-13-11$\frac{1}{4}$ }	31,500 / 18,500
(2) 12 Lakhs Drainage and Water Works ditto... ...	20,000	99$\frac{1}{2}$	
(3) 35 Lakhs ditto various Sanitary Works ditto ...	1,50,000	102$\frac{5}{16}$	
	2,20,000		

I have, &c.—SORABJI NOVROJI COOPER,
Chief Accountant.

No. 7319 of 5th July 1892.

Forwarded to the Standing Committee for information.

H. A. ACWORTH, Commissioner.

No. 3390. *Resolved*: "That memorandum No. 7319, dated 5th instant, from the Commissioner, reporting the sale of Rs. 2,20,000 of 4 per cent. Government paper belonging to several deposit accounts be *recorded*."

No. 3391. *Resolved*: "That the following be *recorded*:—Memorandum No. 7315, dated 5th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 2nd idem."

No. 3392. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 7311, dated 5th instant, sanction be given to the transfer of Rs. 62-13-0 from savings in the grant for Water Works, section II, materials to new Works, Latrines and Urinals for workmen at Chinchpokli Stores to meet excess over the latter grant."

Read letter dated this day, from Mr. Dinsha E. Wacha, forwarding for the inspection of the Committee a bottle of water containing two leeches which were found in water drawn from a tap in the house of a European gentleman living at Byculla.

No. 3393. *Resolved*: "That letter dated this day, from Mr. Dinsha E. Wacha, be referred to the Commissioner for disposal, and that Mr. Wacha be informed that he should supply the Commissioner with the address of the occupier of the house, in the service pipe of which the leeches were found."

No. 3394. Considered list of "Outstanding business" (1st July 1892).

Item No. 4.—Petitions, dated 10th and 20th May 1892, from Haji Mookerderdin Lal Mahomed, Messrs. P. M. Nicholson, S. P. Gadawalla, Maneckjee Jamsetjee Mistri and others, complaining that they have been prevented by the Police from selling boots and shoes on the footpaths in the vicinity of the Crawford Market.

Struck out, the petitions having been discussed this day.

Item No. 5.—Letter, dated 30th May 1892, from Mr. Nana Moroba, stating that he has been served with a notice by the Executive Engineer, Drainage, for the removal of the 6″ × 6″ stoneware gully traps from his property at Girgam and to replace them by new ones.

Struck out, the question having been disposed of this day.

Item No. 8.—Letter No. 5398, dated 13th June 1892, from the Commissioner, on the subject of the erection of a new pumping engine and boiler house at Love Grove. The Commissioner asked to consult the Health Officer in the meantime as to the proposed position of the new pumping station.

Struck out, the Commissioner having stated that he has consulted the Health Officer on the subject.

BOMBAY, 13*th July* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner; the DEPUTY EXECUTIVE ENGINEER, Water Works; and the SECRETARY.

The minutes of the meeting held on the 6th instant, were signed.

No. 3629. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Killick, Nixon & Co., for the supply of 300 tons Dutton's Hartley coal, at the rate of Rs. 16-8-0 per ton, to be delivered at the Municipal Workshops and Carnac Bander Pumping Station ; and (2) with Messrs. Byramji Jehangir & Co., for repairing the embankment over Tulsi main between Haines Road and Mahim.

No. 3630. *Resolved* : "That, as applied for by the Commissioner in his memorandum No. 8007, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 3631. *Resolved* : "That, as applied for by the Commissioner in his memorandum No. 7589, dated 8th instant, the Corporation be recommended to sanction the writing off of Rs. 1,607-4-8 from the live-stock return of the Health Department, being the book-value of 24 bullocks that died and one that was destroyed, during the quarter ending 31st May 1892."

Read letter No. 7622, dated 8th instant, from the Commissioner, to the Secretary, as under :—

SIR,—After re-pointing the walls of the Distributing Basin of the Bhandarwada Reservoir with Indian patent stone and paying the cost thereof, *viz.*, Rs. 8,805-8-3 out of the grant of Rs. 40,764-7-0

sanctioned by the Corporation in their resolution No. 6,259, dated 3rd September last, there remains a balance of Rs. 31,958-14-9. This sum the Executive Engineer recommends should be appropriated for the work of covering the floor of the Distributing Basin with the same material, for plastering a portion of the brick piers in that basin and for filleting the junction of main walls and piers with the floor. The estimated cost of the work is Rs. 37,367. Out of this sum Rs. 31,958-14-9 can be met out of the balance above mentioned, leaving Rs. 5,408-1-3 to be provided for. I have the honour, therefore, to request the Standing Committee to recommend the Corporation to sanction the payment of Rs. 5,408-1-3 from the savings of Rs. 5,592 in the grant for repairs to the 32″ Vehar main embankment between Sion and Kurla, to meet part of the cost of the proposed work.

The reasons for undertaking the work are that the leakage from the filters, when full and before they were repaired, was 132,000 gallons and that from the Distributing Basin was 250,000 gallons. When, after the repairs to the filters last year the Distributing Basin was re-tested, it was found that the daily loss was over 350,000 gallons. In other words, the water which had formerly escaped from the filters had in great part found its way into the Distributing Basin and the real loss in the latter had been greater than its apparent loss. The filters having now been made approximately water-tight, the full leaking powers of the basin have been discovered. This leakage has been reduced by the re-pointing of the walls of the basin by about 90,000 gallons per day, leaving still over 250,000 to be stopped. The floor of the basin has been examined and found faulty in many places. For this reason it has been found necessary to treat the floors and all interior surfaces of the basin in the same way as the walls, that is, with Indian patent stone.

I also request the sanction of the Standing Committee to the work being entrusted to the Indian Patent Stone Company, at the following rates, and provided the leakage is reduced to 12,000 gallons daily :—

1″ Flooring with Indian patent stone, including filleting at similar rate	Rs. 33 per 100 sq. ft.
½″ plaster, Indian patent stone on brick piers up to 5′—6″ above floor level	,, 33 per 100 sq. ft.
Openings in roof for light and making good again	,, 25 each.

As they are the only manufacturers of patent stone, it is useless to invite tenders.

The loss of 12,000 gallons above referred to is about the same as would take place by evaporation, if the basin were open or, in other words, is about the same as does take place *pro rata* over the Vehar, Tulsi and Tansa Lakes and as is lost from the filters at Bhandarwada.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 3632. It was agreed that letter No. 7622, dated 8th instant, from the Commissioner, be printed on the minutes of this day's meeting and brought on for consideration at next meeting.

No. 3633. *Resolved*: "That, as applied for by the Commissioner in his letter No. 7433, dated 6th instant, sanction be given to the transfer of Rs. 464-2-8 from savings in Conservancy Branch, section I, Superintendence and Inspection, Health Department budget, to General Supervision, section I, staff, to meet the cost of acting arrangements made during the absence of Surgeon-Major Weir, on privilege leave from 21st May to 11th June 1892."

No. 3634. *Resolved*: "That the following be *recorded*:—Letter No. 7756, dated 9th instant, from the Commissioner, reporting that he has accepted the tender of Messrs. Warden & Co., the lowest of 5 tenders received, for the roofing of Arthur Road Hospital with Mangalore tiles, at a cost of Rs. 4,747, to be met from the grant of Rs. 5,633, provided for the work, under New Works, current year's budget."

No. 3635. *Resolved*: "That, as applied for by the Commissioner in his letter No. 7867, dated 11th instant, sanction be given to a contract being entered into with Mr. Kaikhosro D. Framji for a period of 3 years, from 1st September 1892, under the terms of section 92 (*b*) of the Municipal Act, for the right to utilize blood at the Slaughter-houses, Bandora, at Rs. 10 per mensem, together with ground rent of Rs. 5 per mensem."

No. 3636. *Resolved*: "That the following be *recorded*:—Letter No. 7838, dated 11th instant, from the Commissioner, reporting that he has entrusted the work of constructing the shed for protecting the pipe cutting machine to Messrs. Richardson & Cruddas."

No. 3637. *Resolved*: "That the following be *recorded*:—Memoranda Nos. 7317 and 7318, dated 5th instant, from the Commissioner, reporting, with reference to the resolutions of the Committee, Nos. 5620 and 4484, dated 9th January 1889 and 3rd October 1888, the transfers (1) of Rs. 7,13,000 (4 per cent. Government paper) and Rs. 51,661-15-9 (in cash) from the Tansa Loan Interest Deposit account No. 2, to the Surplus Cash Deposit account on 29th ultimo; (2) of Rs. 1,25,000, from the Surplus Cash Deposit account, to the Municipal General Fund Pass-book, on 1st instant; (3) of Rs. 10,033-7-0, from the 44 lakhs

Sanitary Works Loan Deposit account No.1, to ditto on ditto; (4) Rs. 1,620-14-2 from the 7 lakhs ditto No. 2, to ditto on ditto; (5) of Rs. 648-4-10, from the 27 lakhs Drainage and Water Works Loan Deposit account, to ditto on ditto; (6) of Rs. 2,296-3-10, from the Agripada House Sullage Water connections Loan Deposit accounts, to ditto on ditto; (7) of Rs. 5,093-10-0, from the 12 lakhs Drainage and Water Works Loan deposit account to ditto on ditto; (8) of Rs. 7,191-0-0, from the 35 lakhs various Sanitary Works Loan Deposit account, to ditto on ditto; and (9) of Rs. 100,000, from ditto, to ditto on 2nd idem.*

No. 3638. *Resolved*: "That the following be forwarded to the Commissioner for disposal, and that the applicant be informed that if he wishes to proceed with his complaint, he should apply to the Commissioner.

"Letter, dated 4th instant, from Mr. Purshotum Janardhanji, stating that in consequence of some excavation carried on by the Drainage Department on the south side of his property in Khuterali Lane, his house has been considerably damaged."

No. 3639. *Resolved*: "That the following be *recorded*. Memorandum No. 7715, dated 9th instant, from the Commissioner, forwarding analyses of Tulsi, Vehar, and Tansa waters for the current month, as under :—

Sample of unfiltered Tulsi water obtained from the Inlet Well, Malabar Hill Reservoir, on the 2nd July 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·17

Sample of filtered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 2nd July 1892.

	Parts per million.
Free Ammonia	·08
Albumenoid Ammonia	·16

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir, on the 2nd July 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·10

Sample of Tansa water taken from hydrant on the 27″ main in Arthur Road, on the 4th July 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·09

* The balances remaining to the credit of the above accounts after effecting the transfers are (1) Nil; (2) Rs. 19,03,515-10-11 (Rs. 18,07,000 in Municipal Debentures at par and Rs. 96,515-10-11 in cash); (3) Rs. 6,60,868-6-9 (Rs. 6,06,808-8-3 in 4 per cent. Government paper for Rs. 6,20,000 and Rs. 54,059-14-6 in cash); (4) Rs. 1,20,000 in 5 per cent. Municipal Debentures at par; (5) Rs. 48,000 ditto; (6) Rs. 1,70,000 ditto; (7) Rs. 2,55,743-5-2 (Rs. 2,34,118-12-0 in 4 per cent. Government paper for Rs. 2,35,000 and Rs. 21,624-9-2 in cash); (8) Rs. 15,63,516-11-8 (Rs. 14,99,866-12-0 in 4 per cent. Government paper for Rs 14,94,100, and Rs. 63,649-15-8 in cash).

Considered the following :—

PROPOSED IMPROVEMENT OF THE DISTRIBUTION OF WATER.

No. 1565 OF 1892-93.

25th April 1892.

To THE MUNICIPAL SECRETARY.

Memorandum.

The views which the Commissioner entertains as to the relative importance of the various extensions of water works proposed in the Executive Engineer's letter No. 3774 of 12th September last, forwarded under the Commissioner's No. 14184 of 16th idem, are herewith submitted. They are the result of further careful consideration and frequent consultation with Mr. Tomlinson and Mr. Clerke.

1st—Connection between Vehar Lake and the Tansa 48″ main—

The Commissioner regrets that this connection was not part of the Tansa scheme, so important is it as an auxiliary. It will practically place Vehar in the position of a distributing reservoir and enable the City to avail itself of the full Tansa and the full Vehar supplies together at all times when communications may be interrupted on the 49 miles of duct between Kurla and Tansa. The proposal is to construct a steel telescopic main beginning with 60″ diameter at Vehar and ending at Kurla at the point of junction with the Tansa 48″ main with 45″ diameter between Vehar Lake and the Tansa Duct. This main will suffice to fully supply both the Vehar 32″ and the Tansa 48″ main. It will be brought down the line of the existing 32″ Vehar main as far as the Railway; will then pass below it, and join the Tansa 48″ main just beyond. The junction with the 32″ main will be made at the Railway. Along this line of 32″ main from Vehar to the Railway a certain length (7,000 feet) is corroded and bad and must be removed and renewed in any case. The remaining portion (23,300 feet) of the 32″ main displaced by the steel main will be available for use in the City. The cost of the steel main, purchase and laying, has been estimated at Rs. 9,41,300, the rupee being taken at 1*s.* 4*d.*

2nd—32″ main from Chinchpokli Station to Grant Road—

The reasons for this are partly given in para. 7 (B) of the Executive Engineer's report of 12th September last, and the point to be further insisted on is the security or insurance thereby afforded to the 32″ main in Grant Road.

3rd—The 24″ main from Parel Road to Sivri Cemetery Road—

The necessity for this has been sufficiently explained already.

4th.—18″ main from Kalachowki Road to Bhundarwada.

5th.—9″ main from Janjikar Street to Musjid Bridge Road.

6th.—12″ main from Hornby Road to Carnac Road.

7th.—12″ main from Carnac Road to Janjikar Street.

8th.—18″ main between Girgam Road and Dongri Street.
9th.—18″ main from Frere Fountain to Bori Bunder.

The first three proposals are the most important and the fourth is a very necessary consequence of the third. The cost of these four will be as follows :—

1.—Rs. 9,41,000
2.—Rs. 2,59,200
3.—Rs. 1,27,100
4.—Rs. 77,400

Total Rs. 14,04,700

The remainder will altogether only cost Rs. 87,975, forming a total of very nearly 15 lakhs.

As has been already pointed out, 7,000 feet of the 32″ main between Vehar and Kurla must in any case be renewed and this will form a charge on revenue. If the proposal for a steel main is adopted, as well as that for the extension of the 32″ connection in the City, the latter can be provided for as already stated by a transfer to the value of about 2 lakhs of 32″ pipes in good order taken up between Vehar and Kurla. These 2 lakhs must be repaid by capital to revenue, and on the other hand revenue must repay to capital the value (about 1 lakh) of the 7,000 feet of corroded pipes, the net result will be a payment of 1 lakh by capital to revenue.

A loan of 15 lakhs for 40 years at 4 per cent. will entail an annual burden on account of interest and sinking fund of Rs. 76,000, and at 4½ per cent. Rs. 82,000.

H. A. ACWORTH,
Commissioner.

26th May 1892.

To THE MUNICIPAL SECRETARY.

The Sub-Committee of the Standing Committee, appointed as per margin on the 18th November 1891, and the 27th April 1892, beg to report that they find, after carefully considering all the papers and details relating to the proposals made by the Executive Engineer in his letter to the Commissioner, No. 3774, dated 12th September last, for the better distribution of water—

That a Sub-Committee be appointed to enquire into, and report on, the question of laying new water mains included in the list accompaying the Acting Commissioner's letters No. 17414, dated 28th October, and No. 18689, dated 13th November last.
Mr. Cowasjee Hormusjee; Mr. Abdulla M. Dharamsi; Mr. G. Cotton; Mr. Javerilal U. Yajnik.

(1) That the difference between the cost of carrying out the whole scheme, including laying of the large steel main from Vehar to Kurla, estimated at Rs. 15,02,165, and the cost of the

partial scheme, namely, that which in any case it is deemed essentially necessary should be carried out at a cost of Rs. 11,00,865, amounts to Rs. 4,01,300 only.

(2) That if the whole scheme be not undertaken, then, by the adoption of the partial scheme, a length of 23,300 running feet of 32″ main will, when the rest of the scheme is undertaken, which eventually will have to be done, remain on the hands of the Corporation practically useless, whereas the whole length thereof could be utilized and the distribution be made much more effective if the whole scheme is now sanctioned.

(3) That, under these circumstances, the Sub-Committee strongly advise the Standing Committee to recommend the Corporation to sanction the whole scheme, the result of which will be that Vehar Lake will then be available as the service reservoir of the Tansa scheme.

A comparative statement showing the details of the difference in cost between the complete and the partial scheme is appended.

A. M. DHARAMSI.
COWASJEE HORMUSJEE.
G. COTTON.

*

COMPARATIVE statement showing difference in cost between the whole scheme recommended by the Municipal Commissioner and the extensions in Bombay only, which latter, it is agreed unanimously, should be carried out.

Partial Scheme.	Rs.	*Complete Scheme.*	Rs.
Cost of extension in Bombay, if carried out without laying the steel main from Vehar to Kurla ...	9,31,190	Cost of steel main, Vehar to Kurla, at Tansa 48″ ...	9,41,300
Cost of relaying defective 32″ pipes at Kurla 7,000 feet, with steel main so as to fit in with the whole length of steel main if laid afterwards	1,69,675	Cost of laying mains in Bombay, after steel main laid and using 20,000 feet 32″ pipes removed from Vehar ...	5,60,865
N.B.—The cost, if of cast-iron 32″ new pipes, would be ...	1,84,800		
Cost of partial Scheme	11,00,865	Cost of complete Scheme ...	15,02,165
Difference in cost ...	4,01,300		

* Mr. Javerilal U. Yajnik was absent from Bombay and consequently was not able to be present at the meeting of the Sub-Committee.—H. W. B.

No. 7569.

7th July 1892.

To THE MUNICIPAL SECRETARY.

MEMORANDUM—

Cost of pumping plant at Bhandup.

1. At the end of 1890, when it appeared probable that pumping from Pawai would not be required for some years after the completion of the Tansa Duct, and when the means were being considered by which temporary assistance could be given from Vehar to the Tansa Duct in case of stoppage on the latter, the builders of the Pawai engines were asked to estimate for the enlargement of the pumps, so that they might fully develop the engine power on a lift of 60 feet. The estimate of Messrs. Simpson & Co., in their letter of the 6th February 1891, was £840 for new pump cases delivered in Bombay. It was considered that the proposal for a gravitation main was so much superior to that of pumping that the pumping scheme was not worked out in detail. The enlarged pumps could be relied on for 13 millions of gallons daily. Another pump of 5 millions of gallons capacity, with boiler, would be required to bring the capacity up to 18 millions of gallons daily, and new houses would be required for this addition. Quarters would be required for the Engineer and staff. A rising main, 48″ diameter, would be required from the Pumping Station on the shore of Vehar Lake to the Tansa Duct and a channel into the lake, so that water would always be available for the pumps. The cost of these works, according to the approximate estimate attached, would be Rs. 2,32,000.

Cost of permanent establishment for the same.

2. The permanent establishment required would cost Rs. 4,236 per annum ; coal for running engines occasionally, Rs. 1,250 ; and stores, Rs. 500. Total Rs. 5,986 per annum.

Cost of temporary establishment for the same.

3. The temporary establishment required, whenever the engines were required, would cost Rs. 13·5 per day ; the coal, Rs. 175 ; and the stores, Rs. 5. Total cost, Rs. 193·5 per day.

Merits of pumping and gravitation schemes compared.

4. The solitary advantage of the pumping scheme over the steel main is a reduced first cost of Rs. 1,69,300. From this advantage are to be deducted—

(1) The capitalized value of Rs. 5,986 per annum, the cost of permanent establishment required, which, at 4 per cent., is Rs. 1,49,650.

(2) The cost of working the pumps whenever required. This would be Rs. 193·5 per day.

(3) The wear and tear and depreciation of engines and boilers would be greater than that of a steel main.

5. The pumping plant would be of no service whatever in any event, except that of a break on the Tansa Duct between Tansa and Bhandup, 41½ miles, unless the second 48″ main were laid from Bombay to Bhandup: then the pumps could lift water at Bhandup into the Duct at a daily cost of about Rs. 12 per million gallons per day, or Rs. 4,380 per annum, which, capitalized at 4 per cent., is equal to Rs. 1,09,500 per 1 million gallons supplied daily. For a supply of 5 millions daily in this way there would therefore be a first expenditure, over the cost of the gravitation main, of the 9 lakhs of rupees for 48″ main on siphons between Kurla and Bhandup; and the equivalent of 5½ lakhs of rupees of capital in working expenses a total of 14½ lakhs of rupees against a saving at present in first cost and capitalized maintenance of Rs. 19,650.

6. Having regard to the universally admitted superiority and reliability of steel over cast-iron in tension, the suggestions of its bursting simultaneously with the Tansa main is one of the most remote contingencies by the law of probabilities, and is certainly less probable than the contingency of the 32″ Vehar main bursting simultaneously with the Tansa main. In this connection it should be remembered that there is at present no record, so far as we know, of such a steel or wrought-iron main having burst: although they have been in use in America for 30 years now. Steel has recently been used on the Liverpool works in the critical place of the tunnel under the Mersey as well as for a temporary main in the bed of a river.

7. The advantages of the gravitation main over the pumping scheme are numerous :—.

(*a*) The gravitation main would be more quickly available in the case of accident.

(*b*) It would discharge at Kurla, where it would have connections with the Tansa 48″ and Vehar 24″ mains and could assist either of them or both of them, when required, besides feeding the 32″ main. It would discharge 24 millions daily at Kurla with a loss of only 25 feet from Vehar; and 32 millions with a loss of only 44 feet, and a continually increasing quantity if the demand in Bombay were such as to greatly reduce the pressure.

(*c*) It protects 8 miles more of the Tansa Duct (nearly 5 miles pipes and 3 miles masonry duct) than the pumping scheme: equal to nearly 20 per cent. of the whole length protected by the pumping scheme.

(*d*) It would at all times (except when there was a break on the Tansa Duct), bring down the supply for 32″ and 24″ mains to Kurla with practically no loss of head, and thereby either improve the pressure in Bombay by 20 feet if the present quantity were taken, or enable a larger quantity by 3 millions daily to be drawn at the present pressure into Bhandarwada Reservoir through the existing Vehar mains.

(e) It would only leave 5¼ miles of the second Tansa main to be laid from Kurla to Chinchpokli to enable another 18 millions (if required) to be brought into the city from Vehar at all times except when there was a break on the present Tansa main. This would entirely obviate* the expenditure of 9 lakhs of rupees on mains between Kurla and Bhandup when the second main is laid, and in the meantime it would enable the gradually increasing demand in the city to be met by the utilization of the Pawai supply by gravitation and the storage of monsoon surplus from Tansa and Tulsi in Vehar. In this way the laying of the second main from Tansa might be deferred for 6 or 7 years beyond the period at which it would otherwise become necessary. The cost of the second Tansa 48″ siphons beyond Bhandup, if of cast-iron, would be about 34 lakhs of rupees.

The greater prospective utility of the gravitation main, as compared with pumps at Bhandup, appears, we think, to be completely established by these considerations, which were examined before the proposal for a gravitation main was recommended, without mention of pumping as an alternative.

Estimates appended.

8. The estimates for cost of mains called for are appended.

List of papers submitted.

9. The papers previously printed and circulated bearing on this subject are :—

Letter No. 5578, dated 8th June 1891, from the Municipal Commissioner to the Municipal Secretary.

Letter No. 10687, dated 4th August 1891, from the Municipal Commissioner, reporting on Corporation's Resolution No. 3714, dated 9th July 1891.

Letter No. 14184, dated 16th September 1891, from the Municipal Commissioner to the Municipal Secretary, forwarding—

Report No. 3774, dated 12th September 1891, from the Executive Engineer to the Municipal Commissioner.

Letter No. 1565, dated 25th April 1892, from the Municipal Commissioner to the Municipal Secretary.

Report of the Sub-Committee of Standing Committee, dated 26th May 1892.

Letter No. 6428, dated 23rd June 1892, from the Municipal Commissioner to the Municipal Secretary, forwarding—

Report No. W 1605 A, dated 18th June 1892, from the Deputy Executive Engineer in charge Water Works.

Letter No. 6549, dated 24th June 1892, from the Municipal Commissioner, forwarding—

Report No. 1631, dated 22nd June 1892, from the Deputy Executive Engineer in charge Water Works.

* Provided, however, it were considered better to take the water at Vehar pressure rather than expend 9 lakhs to bring it on at Tansa pressure.

10. In accordance with the wish expressed by the Standing Committee that, in addition to the information requested in their resolution above replied to, a summary of the reasons for the different works should be prepared, the following *précis* is submitted:—

Précis of reasons for different proposals.

Necessity for connection between Vehar Lake and Tansa Duct.

Growing dependence upon the Municipal supply in Bombay and consequent increasing inconvenience by interruptions which a few years ago would have passed almost unnoticed. Provision should, therefore, be made for a temporary supply from Vehar when for any reason the Tansa supply is interrupted. All cities with similar supplies have made such arrangements, *e. g.*, Glasgow, Leeds, Bradford, Manchester, Liverpool, New York and Sydney.

Importance of Supplementary Main from Vehar.

The present consumption indicates that before a main can be laid it will be desirable to have an increased supply in the hot weather, and that in a few years a regular daily increase will be needed. A gravitation main will meet this want at the same time that it serves as an emergency main for the Tansa supply.

Advantage of a large Steel Main over Cast-iron.

Steel is a much more reliable metal than cast-iron in tension. A saving of 3½ lakhs can therefore be effected besides having a more reliable main. The accumulated interest on this will more than compensate for any extra corrosion. The steel pipe can be laid so large as to relieve the 32″ Vehar main. Wrought-iron pipes have proved a great success in America, but owing to improved processes in the manufacture of steel, steel is displacing wrought-iron in America, and is recommended now by the leading English Hydraulic Engineers, and is being used as opportunity occurs. It will probably continue to become cheaper and cheaper as compared with cast-iron, because much attention is being paid to the manufacture of steel, and the results are satisfactory. Steel pipes manufactured in Britain have been used more or less at Liverpool, Bradford and Kimberley. They have also recently been used at Paris.

Necessity for 32″ Main from Chinchpokli to Grant Road.

The Tansa Duct was judiciously laid out with small falls so as to be supplied in Bombay at as high a level as possible. The pipes fall only 3·20 feet per mile. At the end of the 48″ main at Chinchpokli there is now only the 27″ Arthur Road main and the branch into Parel Road which reduces to 14 inches at Victoria Gardens. The loss of pressure between Chinchpokli and Grant

Road varies from 70 feet to 77 feet,* the greatest loss being of course when the demand is greatest in the morning and evening. One 48″ is equal to four 27″ pipes or three 32″ pipes. It will be evident therefore that even with another 32″ main we shall not be able to discharge all the water from the 48″ main without sacrificing some of the very valuable pressure which has been so carefully conserved on the Tansa Duct. No greater loss of head should occur in the city than on the duct, especially because our greatest pressure is scarcely adequate to effective direct fire service; for supply of the highest floors; and for motive power. The existing 27″ Arthur Road main having now to supply the 32″ Grant Road and 26″ Gamdevi, the pressure is much less than it ought to be and does not do justice to the Tansa pressure. The 27″ should be reserved for the Gamdevi-Girgam main and the new 32″ for the Grant Road 32″ main, besides in each case supplying the districts *en route*.

Necessity for new Main for supply of Parel and Sewri Districts.

The existing 3″ main does not meet the wants of the locality, and connections were only allowed to the Mills on condition that they did not use the water for trade purposes. There is no adequate protection against loss by fire; and the development of the district will be hindered by the want of a sufficient supply of water.

18″ Main from Kalachowki Road to Bhandarwada Reservoir.

Ghorapdeo and Mount Road Districts are in urgent need of a larger main. The old 3″ has been scraped and cleaned out, but it is much too small for the present demand. The proposed 18″ main will not only serve to supply the district through which it passes, but will enable surplus water to be carried to Bhandarwada from the Vehar 24″ or from the Tansa main, and on the other hand will serve to carry water from Bhandarwada when the usual direct supply is interrupted.

18″ Main from Frere Fountain to Bori Bunder.

This main, besides supplying the road along which it passes, and which is likely to be built upon on the western side, within a few years, will also have to supply the 12″ existing main in Gunbow Street and through it several of the streets in North Fort. It will also have to serve as a main to bring in Tansa Water at any time when the usual supply through the Queen's Road main may be interrupted.

* The magnitude of this loss may be illustrated by stating that it is equal to the height of Bhandarwada Reservoir outlet above Bhendi Bazar; that it is equal to 5 ordinary storeys; and that it is equal to the total loss of head between Tansa Lake and Ghat Kopar (45 miles); and that it converts Malabar Hill pressure into Bhandarwada pressure and absolutely prevents Tansa water being delivered into Malabar Hill Reservoir which can therefore only be replenished by Tulsi water.

11. The remaining proposals are as under :—

18″ main from Girgam Road along Colbhat Street to Kalbadevi ; from Kalbadevi along New Hanuman Street to Abdul Rehman Street ; Abdul Rehman Street along Jenjikar Street and Bhandari Street to Dongri Street.

12″ from Hornby Road along Paltan Road to Carnac Road, and from Carnac Road along Chakla to Jenjikar Street.

9″ Chakla Street from Jenjikar Street to Musjid Bunder Road, and Tank Bunder Road (part of) from Coppersmith Street, Mazagon.

(The above will cost Rs. 69,053).

32″ from Dadar Road 48″ Tansa main under both railways along Elphinstone Road ; along Tulsi pipe line from Elphinstone Road to Fergusson Road.

18″ Fergusson Road from Tulsi pipe line to junction of Haines and Warli Roads. These extensions of large mains into G Ward have not attracted much notice and were not included in the Commissioner's memo. No. 1565 of 25th April 1892.

The water revenue from this (G) ward is greater than that from F, D, or even C Wards, and almost as great as that from B (Mandvi) Ward. It is the ward which yields the highest rate of revenue whether regard be had to the length of mains (13 miles or 11 per cent. of total length) in the ward or to the yield per 1,000 gallons ; and the meter revenue exceeds that of any other ward, being about one-third that of total revenue from meter supplies, and exceeding the combined meter revenue from B, C, D and F wards. From a Water Works point of view, therefore, the importance of this ward is not to be estimated by its population only.

Summary of financial proposals.

12. The financial effect of the proposals made may be summarized as follows ; some modifications being made as compared with the Commissioner's memo. above referred to, chiefly owing to the fact that the Vehar 32″ main to be removed and laid in the city is now taken at three-fourths of its full value, or Rs. 15-9-0 per foot instead of Rs. 20-11-0.

	Rs.
Steel main to Kurla	9,41,000
32″ main, Chinchpokli to Grant Road	2,27,656
18″ main to Sewri	81,160
18″ Kalachowki to Bhandarwada	85,140
18″ Girgam to Dongri	42,570
18″ Hornby Road to Bori Bunder	27,720
12″ Hornby Road to Jenjikar Street	12,403
9″ Chakla Street to Musjid Bunder Road ...	5,280
9″ Tank Bundur Road from Coppersmith Street, Mazagon	8,800
	14,31,729

	Rs.
Extensions in G Ward—	
32″ from Dadar Road 48″ Tansa main along Elphinstone Road to Tulsi pipe line and along pipe line to Fergusson Road	1,46,377
Culverts under Railways or Bridges over ...	20,000
15″ along Fergusson Road to Junction of Haines and Warli Roads	34,650
	2,01,027
	14,31,729
	2,01,027
Total Rs....	16,32,756
Add—Cost of Queen's Road 24″ main already laid	63,360
Grand Total...	16,96,116
Deduct—on account of steel main laid over 7,000 feet of Vehar 32″ main which have immediately to be replaced by revenue	1,04,995
Net charge on capital...Rs.	15,91,121

The total length of Vehar 32″ main proposed to be laid in the city is 17,210 feet, and on account of this capital will have to pay to revenue Rs. 2,68,000 on account of the 32″ mains received from the Vehar line.

The above estimates include all cost of laying and 10 per cent. for contingencies throughout, and the payment to revenue of the Rs. 2,68,000 just referred to.

H. A. ACWORTH,
Municipal Commissioner.
S. TOMLINSON,
M. INST. C. E., M. AM. SOC. C. E.,
Deputy Executive Engineer,
in charge Water Works.

Estimated cost of Mains as called for by Standing Committee's resolution of 6th July 1892.

		Length	Cost per 1 foot.	10 per cent. contingencies.	Total.
		Feet.	Rs.	Rs.	Rs.
1	18″ main from Chinchpokli to Grant Road ...	10,800	9	9,720	1,06,920
2	18″ main from Parel Road to Sewri Cemetery Road	8,200	9	7,380	81,160
3	12″ main from Parel Road to Sewri Cemetery Road	8,200	5·5	4,510	49,610
4	12″ main from Kalachowki Road to Bhandarwada	8,600	5·5	4,730	52,030
5	9″ main from Kalachowki Road to Bhandarwada	8,600	4	3,440	37,840
6	9″ main from Jenjikar Street to Musjid Bridge Road	1,200	4	480	5,280
7	12″ main from Hornby Road to Carnac Road.	1,600	5·5	880	9,680
8	12″ main from Carnac Road to Jenjikar Street.	450	5·5	2,475	2,722·5
9	18″ main between Girgam Road and Dongri Street	4,300	9	3,870	42,570
10	18″ main from Frere Fountain to Bori Bunder.	2,800	9	2,520	27,720

Approximate Estimate of cost of providing Pumping Plant at Bhandup to lift 18 millions of gallons daily.

	Rs.
Cost of altering existing Pawai Pumps to lift 13 millions instead of 8 millions daily through 60 feet instead of 100 feet, f. o. b., Bombay...	13,240
Carriage, fitting, &c., in Bombay	1,500
Removal of existing plant, &c., erection at Bhandup, including engine-houses, &c.	23,000
Additional 5 million gallons engine and pump with boiler and houses complete	75,000
Quarters for staff	14,000
48" rising main from Vehar Lake to Tansa Duct	50,000
Channel into lake to bring water to Jack Well	25,000
	2,01,740
15 per cent. contingencies and establishment	30,260
Total first cost Rs.	2,32,000

Permanent Establishment, &c., required for attending to and keeping Plant in working order.

		Per annum. Rs.
1 Engineer	Rs. 300 per month.	
1 Fireman...	„ 20 „	
1 Cleaner	„ 13 „	
2 Watchmen	„ 20 „	
	353 per month × 12 =	4,236

Coal required for occasional working—

50 tons at Rs. 25 per ton	1,250
Stores	500
Total minimum cost per annum... ... Rs.	5,986

Cost of temporary establishment whenever stoppage of Tansa supply occurred.

	Per day. Rs.
4 Drivers on Rs. 2 per day each	8
4 Firemen „ 1 „ „	4
3 Cleaners „ 8 „ „	1·5
7 tons Coal at Rs. 25 per ton	175
Stores	5
Total daily cost ... ... Rs.	193·5

S. TOMLINSON, M. Inst. C. E.,
M. Am. Soc. C. E.,
Deputy Executive Engineer,
in charge Water Works.

7th July 1892.

Proposed by Abdulla M. Dharamsi, Esq., seconded by Grattan Geary, Esq.—

"That memorandum No. 7569 of the 7th instant, from the Commissioner and the Deputy Executive Engineer, Water Works, together with the report of the Sub-Committee, dated 26th May 1892, as to the improvement of the distribution of the water supply, be *recorded* on the minutes of this day's meeting.

No. 3640.

"That the Corporation be recommended to sanction the laying of the following mains:—

	Rs.	Rs.
Steel main Vehar to Kurla	9,41,000	
32" main, Chinchpokli to Grant Road	2,27,656	
18" main from Jackeria Bunder to Golanja Hill, Sewri	81,160	
18" Kalachowki to Bandarwada	85,140	
18" Girgam to Dongri	42,570	
18" Hornby Road to Bori Bunder	27,720	
12" Hornby Road to Jenjikar Street	12,403	
9" Chakla Street to Musjid Bunder Road ...	5,280	
9" Tank Bunder Road from Coppersmith Street, Mazagon	8,800	
		14,31,729
Extensions in G Ward—		
32" from Dadar Road 48" Tansa main along Elphinstone Road to Tulsi pipe line and along pipe line to Fergusson Road ...	1,46,377	
Culverts under Railways or Bridges over ...	20,000	
18" along Fergusson Road to Junction of Haines and Warli Roads	34,650	
		2,01,027
Total Rs....		16,32,756
Add—Cost of Queen's Road 24" main already laid		63,360
Grand Total...		16,96,116
Deduct—On account of steel main laid over 7,000 feet of Vehar 32" main which have immediately to be replaced by revenue ...		1,04,995
Net charge on capital...Rs.		15,91,121

"That the Corporation be further recommended to sanction the raising of a loan of Rs. 16,00,000 to provide for the cost of the whole scheme, the money to be raised as may be required from time to time.

* "That in the meantime the Commissioner be requested to obtain the opinion of an eminent hydraulic Engineer in England as to the comparative advantages of steel over cast-iron mains."

* The last paragraph was added on the proposal of Mr. Javerilal U. Yajnik, seconded by Mr. Bhalchandra K. Bhatawadekar.

Amendment, proposed by K. M. Shroff, Esq.—

"1. That the Standing Committee do not consider it desirable to recommend the Corporation to sanction the laying of steel mains between Vehar Lake and the Tansa 48″ main at Kurla.

"2. That a sub-committee of the Standing Committee be appointed to visit the locality between Vehar and Kurla to inspect the 7,000 feet of 32″ main said to be corroded, and to submit their report on the same.

"3. That it is not advisable to lay a 32″ main from Chinchpokli Station to Grant Road, and an 18″ main in the locality may be sufficient.

"4. The Standing Committee consider the proposal of laying an 18″ main from Parel Road to Sewri cemetery a rather extravagant one. The size of the main will be unnecessarily large for the district. A 12″ main will suffice in the locality.

"5. The proposed 18″ main from Kalachowkee to Bhandarwada may also be reduced to a 12″ main.

"6. That the mains in the remaining localities as suggested by the sub-committee be sanctioned."

Not seconded.

The motion was *carried* (with one dissentient).

No. 3641. *Resolved*: "That, with reference to their resolution No. 3566, dated 7th instant, the Corporation be recommended to sanction the payment of Rs. 1,860 from surplus cash balance for providing 2 masonry and 2 metal ventilating shafts, for Queen's Road sewer."

The following statement * was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 10th July 1892.

No. 3642. *Resolved*: "That memorandum No. 7891, dated 12th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 9th idem, be *recorded*."

No. 3643. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 7915, dated 12th instant, and with reference to the resolution of the Committee, No. 921, dated 4th May last, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 13 tons

* *See* Appendix B.

7 cwt. 2 qrs. and 14 lbs. of Davison's West Hartley coal, in addition to, and at the same rates and on the same conditions as, those sanctioned in the said resolution."

Resolved: "That the following be referred to the Commissioner for disposal, and that the applicants be informed that the matter is under the consideration of the Standing Committee :—

No. 3644.

"Letter, dated 8th instant, from the Agents, Jubilee Manufacturing Company, and other Mill Agents, on the subject of the want of water-supply to their mills at Sewri."

Resolved : "That, as applied for by the Commissioner, in his letter No. 8014, dated this day, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Bai Awabai, widow of Mr. Jamsetji Ratanji, for the recovery of Rs. 23-3-0 property taxes, plus Rs. 2-4-0 notice fees, in respect of her property No. 2619, Marine 3rd Street, C Ward."

No. 3645.

Resolved : "That the following be *recorded* :—Letter No. 7998, dated this day, from the Commissioner, reporting that he has accepted the tender of Mr. Balcrishna Jaganath, the lowest of 10 tenders received, for the supply of 1,000 boundary stones for the pipe line extending from Kurla to Vehar and from Bandora to Tulsi, at the rate of Rs. 1-5-0 each. The amount to be met from the grant for the purpose."

No. 3646.

BOMBAY, 20*th July* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, ESQ., C.C.M.C., *Chairman*.
BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 13th instant were signed.

The seal of the Corporation was affixed to deeds of contract (1) with Mr. Byramji Jehangir for the work of filling in low-lying ground at the Victoria Gardens ; (2) with Mr. Pandu Kalu for certain piece-work in laying branch pipe sewers and putting up cast-iron down-pipes and fittings in the first drainage section.

No. 3947.

The seal was also affixed to deed of agreement with Mr. Naga Luximan, for the supply of earthen flower-pots for the Victoria Gardens. The seal was also affixed (1) to deed of exchange with Rajooma, widow of Karim Mahomed Vulli, and Noorbai, widow of Ally Meya Chand, at Mahim; (2) to deed of exchange of land with Mr. Dharamsey Soonderdass at Sankli Road.

No. 3948. *Resolved* : "That, as applied for by the Commissioner, in his memoranda Nos. 8091, 8092 and 8093, dated 14th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.	Where.
Mr. Ladha Kastoor Batya	...Building at Frere Bunder.
,, Bomaya Assana	... Do. at Kamathipura Bazaar Road.
,, Macoond Gopal	... Do. at Lady Jamsetji Road."

No. 3949. *Resolved* : "That, as applied for by the Commissioner in his memorandum No. 8625, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 3950. *Resolved* : "That letter No. 8001, dated 13th instant, from the Commissioner, be forwarded to the Corporation, with the recommendation that sanction be given to the construction of a storm-water drain in the public passage between Parel and DeLisle Roads, at a point near the Victoria Technical Institute, at a cost of Rs. 1,834, to be met out of savings of Rs. 2,542-13-4, under Conservancy Branch, section II, Labour, A, Scavengering, Health Department budget, for the current year."

No. 3951. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 8006, dated 13th instant, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Mr. Gangadhar Chimnaji, for the recovery of Rs. 7-10-6, on account of general tax due by him, in respect of a small piece of land and a hut owned by him at Walkeshwar, Banganga Row, D Ward."

No. 3952. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 7997, dated 13th instant, sanction be given, under section 240 of the Municipal Act, to Messrs. Campbell and Hewson being allowed, on behalf of the executors of Mr. Kanjee Khetsey, to lay a direct 6″ stone pipe connection within and through

their house in Bazar Gate Street, to the sewer in that street, under the conditions prescribed in the Standing Committee's resolution No. 5961, dated 24th September 1890."

Proposed by Javerilal U. Yajnik, Esq., seconded by R. G. Oxenham, Esq.—

No. 3953. "That the Corporation be recommended to sanction the expenditure of Rs. 1,000, from surplus cash balance, on account of the cost of printing the proceedings of the House-Connections Committee and of the allowance payable to Mr. Gordon, Short-hand Writer, for taking notes of the evidence given before the Committee."

Carried by 5 *votes against* 3.

No. 3954. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 8456, dated 18th instant, sanction be given to the payment of Rs. 4,590, to Messrs. Campbell and Hewson, on account of services rendered by them relative to the enquiry before the Collector of Bombay into the amount of compensation payable to Mr. Damodar Tapidas, in respect of the acquisition of his land near the Victoria Gardens, in regard to which a claim of Rs. 10 per square yard was made whilst the Collector awarded an average of Rs. 5-8-0 a yard. The amount to be met from the grant of Rs. 2½ lakhs, sanctioned by the Corporation for the purchase of such land."

No. 3955. *Resolved*: "That letter No. 7622, dated 8th instant, from the Commissioner, be forwarded to the Corporation, with the recommendation that sanction be given (*a*) to the covering of the floor of the distributing basin of the Bhandarwada Reservoir with Indian patent stone, (*b*) to the plastering of a portion of the brick piers in that basin, (*c*) to the filleting the junction of main walls and piers with the floors, and (*d*) to the payment of the cost of these works, *viz.*, Rs. 37,367, from the following grants :—Rs. 31,958-14-9, out of the balance of Rs. 40,764-7-0, sanctioned by the Corporation, in their resolution No. 6259, dated 3rd September last, for pointing the walls of the settling and distributing basins with Indian patent stone; and Rs. 5,408-1-3, from the savings of Rs. 5,592, in the grant for repairs to the 32″ Vehar main embankment between Sion and Kurla.

"2. That, subject to such sanction being given by the Corporation, the Standing Committee sanction the carrying

out of these additional works by the Indian Patent Stone Company at the following rates, and provided the leakage is reduced to 12,000 gallons daily :—

" 1" Flooring with Indian patent stone, including filleting at similar rate, Rs. 33 per 100 square feet.

" ½" Plaster—Indian patent stone on brick piers up to 5'—6" above floor level, Rs. 33 per 100 square feet.

" Openings in roof for light and making good again, Rs. 25 each.

" 3. That, under the terms of section 72 (3) of the Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as the said Company is specially engaged in the manufacture of Indian patent stone."*

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 8090, dated 14th instant, sanction be given to the transfer of Rs. 429-6-3, from savings in Conservancy Branch, section II, Labour and Scavengering, Health Department budget, to section I, Establishment, License Department, to meet the cost of acting arrangements made during the absence of the Superintendent of Licenses on privilege leave."

No. 3956.

Resolved : " That the following be *recorded* :—Letter No. 8452, dated 18th instant, from the Commissioner, reporting the sale of the following rights for the year ending 31st July 1893 :—(*a*) to tap 30 cocoanut trees in the compound of the D Ward Office at Gamdevi and gathering fruit therefrom, to one Rama Visram for Rs. 45; (*b*) to cut grass from the following places :—(1) near Bellasis Bridge, area 4,828 square yards, (2) Arthur Road, area 6,391 square yards, (3) Agripada main drain, from Agripada Milch Cattle stables and from Haines Road to Arthur Road, area 7,720 square yards, (4) between Wari Bunder Road and the G. I. P. Ry. compound, Hancock Bridge, area 838 square yards, to one Malu Sayana, for Rs. 205."†

No. 3957.

Resolved : " That the following be *recorded* :—Letter No. 8440, dated 18th instant, from the Municipal Commissioner, reporting, for the information of the Committee, that he has sold the right of cutting grass for four months from the Clerke Road riding path, to one Hassana Balu, for Rs. 25."‡

No. 3958.

* See Proceedings of the Standing Committee, dated 13th July 1892.
‡ Last year the sales realised Rs. 40 and Rs. 130 respectively.
† This was the first occasion on which the right was sold.

Resolved : "That memorandum No. 8236, dated 15th instant, from the Commissioner, reporting the fall of a house in Naigam Cross Road, owned by Mr. Bhimji Shamjee, be *recorded*."* No. 3959.

Resolved : "That the following be printed and circulated and brought on for consideration at the next meeting :—Memorandum No. 8352, dated 16th instant, from the Commissioner, forwarding the report of the working of the Gokuldas Tejpal Hospital for 1891." No. 3960.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 8385, dated 18th instant, and in lieu of the resolution of the Town Council, No. 1194, dated 17th November 1886, sanctioning the payment of compensation in respect of 19·57 square yards of ground taken up in Agiary Street, to Mr. Damodardas Parbhudas, sanction be now given to the payment of such compensation, to Mr. Manecklal Motilal for himself and his brother, Mr. Jamnadas Motilal, a minor." No. 3961.

Resolved : "That the following be *recorded* :—Memorandum No. 7893, dated 12th instant, from the Commissioner, reporting, with reference to the resolution of the Committee No. 4484, dated 3rd October 1888, the transfers of Rs. 1,00,000—(1) of Rs. 50,000, from the 35 lakhs various Sanitary Works Loan Deposit Account, to the Municipal General Fund Pass-book, on 9th instant ; (2) of Rs. 50,000, from the 44 lakhs Sanitary Works Loan Deposit Account No. 1, to ditto on ditto."† No. 3962.

Resolved : "That the following be laid on the table :—Letter, dated 15th instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of receipts and disbursements at the end of each week for the month of June last, and compared them with the general and subsidiary ledgers and found them correct. Forwarding the usual summary and statements of their scrutiny of accounts." No. 3963.

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* The estimated loss in which case was Rs. 40, no persons were injured, and the house was 25 years old.

† The balances remaining to the credit of the above accounts after effecting the transfers are (1) Rs. 15,13,516-11-8 (Rs. 14,99,866-12-0 in 4 per cent. Government paper for Rs. 14,54,100 and Rs. 13,649-15-8 in cash) ; (2) Rs. 6,10,868-6-9 (Rs. 6,06,808-8-3 in 4 per cent. Government paper for Rs. 6,20,000 and Rs. 4,059-14-6 in cash).

No. 3964. *Resolved*: "That the following be forwarded to the Commissioner for disposal, and that the applicant be informed accordingly :—Letter from Motichund Hurrukchund, giving notice that, unless, within 30 days from the delivery of his letter, the rate (Rs. 20) offered for his land at Champawadi is increased, he will file a suit in the Court of Small Causes for the recovery of compensation at the rate of Rs. 150 a yard."

No. 3965. *Resolved*: "That, with reference to the offer of Mr. Saishia R. Naido to erect, at his own cost, a public drinking trough for cattle at the junction of Hornby and Paltan Roads, the Corporation be recommended to sanction the free supply of water to the trough, under the terms of section 269 of the Municipal Act, subject to the following conditions :—That the design of the proposed structure is submitted to, and approved by, the Commissioner ; and that on completion the trough be handed over to the Corporation."

The following statement * was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 17th July 1892.

Considered the following :—

DELISLE ROAD, CHINCHPOKLI,
BOMBAY, 23*rd May* 1892.

To H. A. ACWORTH, Esq., C.S.,
Municipal Commissioner for the City of Bombay.

SIR,—In the Cavel Street I have newly erected four blocks of separate dwelling houses, in three of which there are in each accommodations for three families on each of the three floors, and in the fourth there is accommodation for two families on each of the three floors. I want to take water connections to these dwellings, but I learn that the nearest water main in this locality is the one near the Portuguese Chapel here, and that it is of 3″ diameter.

In my neighbourhood there are many crowded houses, but there is no provision for supply of water in case of fire, the main being far off as I have said.

Under these circumstances I propose, with your permission, to lay a 3″ water main up to my property and put up a fire hydrant at the end, and hand it over to the Municipality, so that it may be used for the purposes of fire to the surrounding properties.

I also request that I may be allowed three 1 inch and one $\frac{1}{4}$ inch branches from the main for my four dwellings mentioned above. By complying with my request, I shall feel extremely obliged.—I have, &c.,

D. C. ATHAIDE.

* *See* Appendix **B**.

No. 8538 OF 1892-93.

BOMBAY, 19*th July* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—I have the honour to state that one Mr. D. C. Athaide has expressed his willingness to lay a 3″ water pipe from Cavel Church to his property in Cavel, but the Deputy Executive Engineer, Water Works, is of opinion that no street main of a less diameter than 4″ should be laid, and in this view I concur. Mr. Athaide is not willing to lay a 4″ main, but offers to contribute Rs. 300 towards the cost of it, if the Municipality will lay it. The total cost of extending the main of about 350 feet will be Rs. 606.

I have the honour to request the Standing Committee to recommend the Corporation to accept the offer of Mr. Athaide to allow the main to be laid and the balance of the cost of Rs. 306 to be paid out of savings on Water Works materials grant.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 3966. *Resolved* : " That, as recommended by the Commissioner, in his letter No. 8538, dated 19th instant, the Corporation be recommended to accept the offer of Mr. D. C. Athaide to contribute Rs. 300 towards the cost of laying a 4″ water main from the Cavel Church to his property in Cavel. The balance of the expenditure, namely, Rs. 306, to be met out of savings on the grant for materials, Water Works."

No. 3967. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 8537, dated 19th instant, sanction be given to the expenditure of Rs. 369-8-6, to meet the cost of putting up twenty-five kerosine oil lamps from Jakeria Bunder to Sewri Cemetery *plus* the cost of lighting Rs. 50 a month. The amount to be met from savings in the grant for Kerosine Oil Lighting."

No. 3968. *Resolved:* " That the following be *recorded*:—Memorandum No. 8459, dated 19th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 16th idem."

No. 3969. *Resolved* : " That the papers received with the Commissioner's letter No. 8562, dated 19th instant, regarding Messrs. Walsh, Lovett's claims, be referred to the following Sub-Committee for report :—Mr. M. Abdulla Dharamsi, Mr. Bhalchandra K. Bhatawadekar, the Hon. Mr. Fazulbhoy Visram, Mr. K. M. Shroff. Three to form the quorum."

BOMBAY, 27*th July* 1892.

AT the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 20th instant, were signed.

The seal of the Corporation was affixed to 11 attested duplicate debentures of the Municipal Sanitary Works Loan of 1885, Nos. 666—673 N. N., 1691 N. N. and 2002 and 2003 N. N., of Rs. 500 each, and 1 consolidated debenture of the loan of 1878, of Rs. 2,000.

No. 4268. *Resolved*: "That, as applied for by the Commissioner in his memoranda Nos. 8972 to 8976, dated 25th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owner.	Where.
Shri Nathji Maharaj ...	...Building at No. 92, Kika Street.
Mr. Esa Fazla	... Do. at No. 424, Sewri Cross Road, (Coliwada).
„ Mulji Devidas for Mr. Bhagwandas Pragji ...	Do. at Elphinstone Road.
„ Pandoo Vithoo Mali ...	Do. at Gilder Street.
„ Raghunath Baba Saheb Malik	Do. at Girgam Road."

No. 4269. *Resolved*: "That, as applied for by the Commissioner in his memorandum No. 9238, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 4270. *Resolved*: "That, as applied for by the Commissioner in his memorandum No. 8691, dated 21st instant, sanction be given to the transfer of Rs. 178-2-4, from savings in the grant for streets and buildings, C, road watering, providing 30 hydrants and 1,000 feet of Merryweather's patent rubber, &c., Engineer's budget, to

same head, D, road repairs and maintenance, 8, purchase of road sweeping and road scraping machines, to meet the cost of advertisement charges."

Resolved : " That, as applied for by the Commissioner in his letter No. 8899, dated 23rd instant, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 500 tons Hastings Hartley coal, at Rs. 16-4-0 per ton, to be delivered at the Love Grove Pumping Station.

No. 4271.

" 2. That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as similar arrangements sanctioned by the Committee's resolution No. 9755, dated 7th January 1891, for the purchase of coal during the current year have been advantageous to the Municipality."

Resolved : " That the following be *recorded* :—Letter No. 8901, dated 23rd instant, from the Commissioner, reporting that he has sold the right of cutting and removing grass from Municipal land on Tulsi pipe line, from Mahim to Mahaluxmi for the current year, to Ghambirsing Kalusing for Rs. 56."*

No. 4272.

Resolved : That the following be *recorded* :—Memoranda Nos. 8460 and 8461, dated 19th instant, from the Commissioner, reporting, with reference to the resolutions of the Committee, Nos. 4484 and 5620, dated 3rd October 1888 and 9th January 1889, the transfers of Rs. 1,77,571-3-9—(1) of Rs. 96,515-10-11, from the Surplus Cash Deposit account, to the Municipal General Fund pass-book, on 11th instant; (2) of Rs. 40,555-8-10, from the 5 per cent. Municipal Loans Sinking Fund Deposit account, to ditto, on 16th idem ; (3) of Rs. 40,000, from the Surplus Cash Deposit account, to 5 per cent. Municipal Loans Sinking Fund Deposit account (5 per cent. Municipal debentures for Rs. 40,000), on 11th ditto ; and (4) of Rs. 500, from ditto, to Municipal Building Fire Insurance Fund Deposit account (5 per cent. Municipal debentures for Rs. 500), on 15th ditto."†

No. 4273.

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* Last year the right realized Rs. 99.

†The Chief Accountant reports to the Commissioner that the balances remaining to the credit of the above accounts after effecting the transfers are—(1) Rs. 18,07,000 in 5 per cent. Municipal debentures at par, and Rs. 7,11,837-13-0 in 4 per cent. Government Paper for Rs. 7,13,000; (2) Rs. 4,69,500 in 5 per cent. Municipal debentures at par and Rs. 333-5-4 in cash; (3) Rs. 17,66,500 in Municipal debentures at par and Rs. 7,11,837-13-0 in 4 per cent. Government paper for Rs. 7,13,000.

Considered the following:—Letter No. 1436, dated 19th July 1892, from the Chief Accountant, to the Commissioner :—

SIR,—I have the honor to forward, for transmission to the Standing Committee, a return of receipts and disbursements of the Bombay Municipality for the quarter ending 25th June 1892 as compared with the corresponding quarter for the previous year as required by the then Town Council Resolution No. 465 of 1st June 1887, with a list of additional grants sanctioned by the Corporation during the quarter.

2. From the progress made in the closing of the past year's accounts, I am able to state that the revenue has been 3 lakhs better than the estimate and there have been savings in expenditure of about 5 lakhs, exclusive of sums required for the renewal of lapsed grants. Of this large surplus more than 3 lakhs was anticipated in October last and has already been appropriated in the current year's Budget.

3. Until the past year's accounts are finally closed, I shall be unable to state with accuracy how much of the balance of the above unappropriated surplus (after allowing for extra grants, advances for stores, &c.,) will remain available for further appropriations, swelling our cash balance in the meantime.—I have, &c.,
SORABJI NAVAROJI COOPER, Chief Accountant.

Additional Grants sanctioned by the Corporation during the Quarter ending 25th June 1892.

Corporation Resolution No.	Date and month.	Nature of work.	Amount.
			Rs. a. p.
193	April 6 1892. ...	Grant of Rs. 8,000 as an advance from surplus cash balance to meet the cost of purchase of cement required for the drainage works now in progress...	8,000 0 0
186	„ 6 ...	Grant of Rs. 1,095 from surplus cash balance, being difference in the amount budgetted for the removal of the offal from the Bandora Slaughter Houses during the current year ...	1,095 0 0
1201	May 9 ...	Grant of Rs. 360 from surplus cash balance to meet the cost of leasing from the Port Trust during the current year 277½ square yards of ground in Bassin Street at Rs. 30 a month, such land being required as the site of a disinfecting chamber	360 0 0
1403	„ 12 ...	Grant of Rs. 750 from surplus cash balance to meet the cost of acting allowance to Mr. T. C. H. White at Rs. 250 per mensem during the absence of Mr. Tomlinson on leave for three months from 30th July next	750 0 0
		Total Rs....	10,205 0 0

ACCOUNT OF THE BOMBAY MUNICIPALITY
as contrasted with that for the

	Budget Estimate.	Quarter ending 27th June 1891.	Quarter ending 25th June 1892.
RECEIPTS.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Opening Balance	16,00,000 0 0	3,30,157 11 7	1,83,603 13 5
General Tax	18,48,758 0 0	5,33,244 10 0	5,21,587 9 8
Water Works Revenue (including Water Tax) ...	12,61,300 0 0	2,64,769 7 9	2,99,368 1 10
Wheel Tax and Tolls ...	3,16,312 0 0	74,508 6 0	67,191 9 0
Halalkhor Tax	5,53,000 0 0	1,61,106 2 6	1,63,319 8 5
Duties, Town...	9,00,000 0 0	3,86,719 3 5	2,94,676 5 8
Licenses	70,750 0 0	23,569 2 0	16,945 14 0
Receipts from Govt. for Liquor Licenses.	1,43,750 0 0	1,43,750 0 0	1,43,750 0 0
„ for Tobacco Duty.	1,80,000 0 0	52,709 14 0	52,819 0 0
Market Receipts	3,33,500 0 0	76,941 8 5	90,628 9 4
Miscellaneous Fees	46,500 0 0	9,634 13 11	11,293 2 4
„ Fines and Penalties...	7,000 0 0	2,134 11 5	5,768 9 3
„ Receipts ...	1,08,357 0 0	29,025 10 8	17,431 5 10
„ Savings ...	2,000 0 0	†1,863 12 9	.....
Public Gardens	6,290 0 0	2,611 10 9	1,291 5 9
Contribution from Municipal servants towards Pension, &c., Fund	15,000 0 0	3,351 14 9	3,883 10 9
Tramway Rent	36,200 0 0	18,096 1 11	18,096 1 11
Interest and Profit on Investments	1,21,600 0 0	7,702 12 0	37,476 8 5
	59,50,317 0 0	17,88,011 15 9	17,45,527 6 2
Debt	.....	4,000 0 0	.....
Bank of Bombay Loan and other Deposit Accounts ...	....	9,78,100 0 0	2,17,600 0 0
Workshop, Recoveries ...	.. ..	581 2 4	458 15 7
Advances	.....	1,08,949 4 3	22,228 9 11
Deposits	.....	77,235 9 1	89,767 6 9
Rupees ...	59,50,317 0 0	29,56,877 15 5	20,75,582 6 5
Total Rupees...	75,50,317 0 0	32,87,035 11 0	22,59,186 3 10

† Debits deducted.

FOR THE QUARTER ENDING 25TH JUNE 1892, Quarter ending 27th JUNE 1891.

	Budget Estimate.	Quarter ending 27th June 1891.	Quarter ending 25th June 1892.
DISBURSEMENTS	Rs. a. p.	Rs. a. p.	Rs. a. p.
Superintendence	1,90,436 0 0	41,182 11 2	43,918 2 3
Assessment and Collection Department	2,53,996 0 0	50,530 8 0	50,746 13 5
Fire Brigade...	1,37,930 0 0	15,356 2 0	29,246 1 1
Public Gardens	82,297 0 0	10,288 5 6	9,260 14 9
Public Works Engineer's Dept. — General Supervision Estt.	41,060 0 0	9,546 14 1	9,864 8 2
Public Works Engineer's Dept. — Drainage	1,93,429 0 0	47,052 8 3	36,522 10 4
Public Works Engineer's Dept. — Water Works	2,97,010 0 0	‡10,85,472 15 3	39,596 6 0
Public Works Engineer's Dept. — Streets and Buildings Inspection and Supervision Estt.	87,383 0 0	20,366 10 1	20,090 3 4
Public Works Engineer's Dept. — Public Lighting ...	3,34,379 0 0	74,680 2 1	58,085 2 4
Public Works Engineer's Dept. — Road Watering... ...	82,137 0 0	22,358 5 3	16,749 2 4
Public Works Engineer's Dept. — Road Repairs and Maintenance...	4,57,547 0 0	43,837 2 3	81,412 1 2
Public Works Engineer's Dept. — Street Improvements ...	1,05,000 0 0	15,574 1 5	16,134 2 11
Public Works Engineer's Dept. — Cleaning, Lighting and Repairing Port Trust Wharves	37,642 0 0	.....	.....
Health Department... ...	14,21,313 0 0	2,60,014 13 5	2,31,780 13 10
Police Charges	4,00,000 0 0	64,571 5 9	64,571 5 9
Education	87,720 0 0	23,260 10 0	27,349 1 8
Hospitals	60,108 0 0	11,856 0 10	14,842 8 3
Miscellaneous	82,045 0 0	28,737 14 8	19,596 7 3
New Works and Reserve Funds	1,13,268 0 0	*1,68,798 7 9	17,820 0 1
Debt (including Sinking Fund deposted with the Bank of Bombay)... ...	21,68,278 0 0	3,59,026 12 2	4,50,574 15 9
	66,32,978 0 0	23,52,512 5 11	12,38,181 8 8
Loan Works Accounts ...	.....	3,41,142 10 11	6,33,384 15 9
Bank of Bombay Loan and other Deposit Accounts ...	.....	36,210 12 0	56,079 3 0
Workshops	.....	12,411 0 0	10,680 4 2
Advances	.....	1,82,470 7 8	66,180 6 9
Deposits	.....	3,31,416 14 5	1,64,861 8 0
Rupees...	66,32,978 0 0	32,56,164 2 11	21,69,367 14 4
Closing Balance ...	.....	30,871 8 1	89,818 5 6
Estimated Balance on 31st March 1893...	9,17,339 0 0	.....	.....
Total Rupees...	75,50,317 0 0	32,87,035 11 0	22,59,186 3 10

‡ Includes Rs. 10,37,573-4-8 on account of Tansa and other Water Works executed out of Loan Funds and Investment of Surplus Tansa Loan and Interest Fund.

* Includes Rs. 1,51,814 on account of Expenditure incurred on the New Municipal Office Building paid out of the Municipal Building Invested Fund.

Memorandum No. 8692, dated 21st July 1892, as under :—

Submitted to the Standing Committee for information.—H. A. ACWORTH, Commissioner.

No. 4274. *Resolved:* "That the following be printed on the minutes of this day's meeting :—Memorandum No. 8692, dated 21st instant, from the Commissioner, forwarding letter No. 1436, dated 19th idem, from the Chief Accountant, together with a return of receipts and disbursements for the quarter ending 25th June 1892."

Considered letter No. 8755, dated 21st instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honor to forward, for approval by the Standing Committee and Corporation, draft of an agreement to be entered into with the Bandora Municipality for the supply of water for five years from 1st instant in lieu of the agreement which expired on that date. The only alteration of any practical importance is the allowance in clause 1, of 10 per cent. for leakage. This, though forming no part of the old agreement, had, I found, been allowed by my predecessors and it was continued by me.

2. The Corporation, by resolution No. 3282 of 14th July 1890, determined that before the renewal of the agreement with Bandora a sum of Rs. 2,618 should be recovered from that Municipality. This was on account of alterations of mains contingent on the transfer of the internal supply to the Bandora Municipality and was resolved on at my recommendation. On reconsideration, however, I think the terms are hardly fair. Of the total amount, Rs. 900-14-4 was for the cost of meters, but this should not now be insisted on, as it is our practice to let meters on hire and not to sell them. The rent of the meters from 31st October 1885 to 30th June 1892 should be substituted and this will amount to Rs. 498. Deducting Rs. 900-14-4 from Rs. 2,618, leaves a balance of Rs. 1,717-1-8. This embraces the cost of altering the connections to (*a*) the Bandora Municipality, (*b*) the Slaughter-houses, and (*c*) the Railway Station. As the Bandora Municipality never had any notice that this expense would be incurred, it seems to me that the fair thing to do is to charge them only for (*a*), which cost Rs. 668-14-4 ; add to this Rs. 498 for the hire of the meters, and the total to be demanded from the Bandora Municipality will be Rs. 1,166-14-4.—I have, &c., H. A. ACWORTH, Commissioner.

No. 4275. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 8755, dated 21st instant, the Corporation be recommended to sanction the renewal of the agreement with the Bandora Municipality for the supply of water for a period of five years from 1st

July 1892, as per draft agreement submitted therewith, and at the rate of twelve annas per 1,000 gallons by meter measurement, subject to an allowance of 10 per cent. thereof for leakage, and subject to any corresponding increase or reduction of the Bombay rate for supply of water by meter measurement during the said five years.

"2. That with reference to their resolution No. 3282, dated 14th July 1890, the Corporation be recommended to sanction the recovery from the Bandora Municipality of Rs. 1,166-14-4 only, instead of Rs. 2,618, the recovery of which was originally sanctioned for cost of alterations of mains contingent on the transfer of the internal supply of water to that Municipality."

Considered the following :—

ANNUAL REPORT OF THE GOCULDAS TEJPAL HOSPITAL, BOMBAY, FOR THE YEAR 1891.

1. CONSERVANCY AND WATER SUPPLY.—The system of conservancy adopted in this Hospital is "the water carriage system," and the closet in use is the "trough" closet. This system worked well during the year. The latrines were frequently inspected by me and the House Surgeon, and were kept clean and disinfected. The water-supply was good in quality. The quantity as usual was not sufficient, and the pumps had to be worked by hand labour to provide water to the tanks on the upper floors. It is to be hoped that when the Tansa Water Works are completed the necessity of working the pumps will be obviated and the supply will prove sufficient.

2. HOSPITAL BUILDINGS.—The usual repairs and the painting and lime washing of walls and the polishing, &c., of windows were satisfactorily done by the Public Works Department. The hospital fittings were kept in good order, and the patients' beds were painted, repaired and kept clean and well aired.

3. GENERAL HEALTH OF THE TOWN was fairly good.

4. ATTENDANCE OF PATIENTS.—

(*a*) *In-door patients.*—The total number of admissions during the year was 2,953 as contrasted with 2,546 of last year, being an increase of 407. The total treated in the wards was 3,065 as contrasted with 2,648 of last year, being an increase of 417. Each bed accommodated during the year about 25 patients. The average detention in Hospital was about 12 days. The average daily number of in-door patients was 108·8 : the average of men being 89·5, women 13·7, and children 5·6. The increase in the total number of admissions was due to a larger number of cases of malarial fever, respiratory affections and rheumatism, but particularly to a large number of cases of surgical injuries.

(*b.*) *Out-door patients.*—The total number of admissions was 15,030 as contrasted with 14,782, showing an increase of 248. The total treated was 15,132 as contrasted with 14,905 of last year, showing an increase of 227. The average daily number of sick out-patients was 98·8.

5. COMMON DISEASES AMONGST THE IN-PATIENTS.—

(*A*) *Medical*—The admissions were in the following order:—(1) Malarial fevers 343 ; of these there were 286 cases of the quotidian variety of intermittent fever, 54 of remittent fever, and 3 of malarial cachexia. (2) Respiratory affections 201 ; of these there were 115 cases of bronchitis, mostly of the chronic form, 59 of pneumonia, and 15 of asthma. There was thus a much larger number of bronchial affections during this year than during previous years. (3) Rheumatism 191 ; all were chronic cases. (4) Diarrhœa 141. (5) Dysentery 111. These cases of diarrhœa and dysentery were chronic and of a very bad type and occurred in beggars, pilgrims, and others whose constitutions were very much impaired by privation. (6) Tubercle 91. These were cases of pulmonary tubercle in advanced stages occurring in the same classes of patients as the above. (7) Nervous diseases 80 ; of these the principal ones were, hemiplegia 17, tetanus 16, epilepsy 7, insanity 6. These last were only detained for a short time and then either given in charge of friends or the police. (8) Diseases of the liver 59 ; of these the principal ones were, hepatitis 36, hepatic abscess 11, and jaundice 7 ; the hepatic abscess cases were mostly treated surgically.

(*B*) *Surgical.*—There were as usual a very large number of cases of injuries from various kinds of accidents, viz :—Carriage accidents; tram accidents, which are unfortunately not unfrequent; accidents on the shipping, from which alone 106 patients were admitted, and in docks ; mill accidents, &c., and from assaults. These cases furnished the largest number of admissions to this hospital. There were 729 cases of *local injuries ;* of these 244 were of the lower extremity, 217 of the upper extremity, 137 of the head and face, 47 of the chest, 33 of the back, 25 of the abdomen, 13 of the pelvis, 8 of the neck, and 5 of the eye. There were 83 cases of *general injuries.* The local injuries above mentioned were of the following nature in their order of frequency :—*Wounds* of all kinds 284 ; of these one was of the pericardium and heart, one opening the abdominal cavity, and one opening the chest cavity. *Fractures* 229 ; of these 191 were simple and 38 were compound. Of these fractures again the important ones were as follows :—Fractures of the vault of the skull 7, of the base of the skull 8, of the spine 5, and of the pelvis 4. *Contusions* 194 ; of these 24 were contusions of the abdomen, with one complicated with rupture of abdominal viscera. *Dislocations* 8 ; of these three were compound, and the rest simple. The principal surgical diseases were in the following order :—(1) *Venereal diseases* 165 ; of these there were 15 cases

of primary syphilis, 64 of secondary syphilis, 27 of gonorrhœa, and 59 of other varieties of venereal disease, such as soft chancres, which are returned as ulcer of genitals in the official returns. In this connection I may mention that there were 11 prostitutes treated at this hospital suffering from venereal diseases, besides others suffering from other diseases. These cases of venereal diseases were all very severe cases and required treatment in hospital. (2) *Ulcers* of various kinds 63. (3) *Abscesses* of various kinds 56. (4) *Tumours* 33; of these there were 7 carcinomas, 2 sarcomas, 5 elephantiasis, and the rest were ordinary non-malignant tumours, including one polypus of the uterus. (5) *Disorders of the rectum and anus* 32; of these the principal ones were external piles 9, and fistula 10. (6) *Bubœs* 31. (7) *Skin diseases* 29. (8) *Burns* of various degrees 28. (9) *Diseases of the tunica vaginalis* 26; of these there were 12 hœmatocele and 14 hydrocele cases. Only such cases of hydrocele were admitted as were either old standing and required radical measures or were complicated with hœmorrhage or had very old and thickened and calcareous sacs. All the rest were treated as out-patients. (10) *Calculus* in the bladder 16. (11) *Diseases of bone*, such as caries and necrosis 14, including one case of caries of the spine. (12) *Strangulated hernia* 14; of these only 2 required herniotomy. (13) *Orchitis* 10. (14) *Stricture of urethra* 9. (15) *Ear diseases* 6. (16) *Eye diseases* 4.

(*C*) *Toxicological* 139; of these there were 118 admissions from alcoholic poisoning, 10 from opium, 4 from arsenic, 3 from datura, 2 from cannabis indica, 1 from petroleum, and 1 from sulpuric acid poisoning. There were five cases of poisoned wounds by venomous animals, one of these being a case of hydrophobia, which proved fatal a few hours after admission.

Common diseases amongst the out-patients.—The principal ones were in the following order :—

(*a*) Malarious fevers, principally ague, 2,100.
(*b*) Skin diseases, principally scabies, 1,633.
(*c*) Respiratory affections, principally bronchial catarrh and bronchitis, 1,162.
(*d*) Ulcers, principally occurring in poor and half starved people, 918.
(*e*) Rheumatism, 906.
(*f*) Intestinal worms, 569.
(*g*) Diarrhœa and dysentery, 399.
(*h*) Eye diseases, chiefly conjunctivites and affections of the cornea, 391.
(*i*) Ear diseases, chiefly otitis externa, and accumulation of hardened cerumen, 389.

There were 2,708 cases of injuries amongst the out-patients, principally wounds and contusions.

Police, Medico-legal Cases and Inquests.—There were 2,001 Police cases brought to hospital for treatment, mostly accidents

and assaults. There were 41 inquests held during the year, of which 30 were for fatal injuries, 5 for poisoning, 3 for gangrene, 2 for tetanus, and 1 for jaundice.

6. Observations on Major Surgical Operations.—There were 110 major operations performed during the year, or 29 less than during the previous year. Of these 110 operations, 9 proved fatal, showing a mortality of 8·1 per cent. Of the fatal cases one was a case of hepatic abscess, in which aspiration was done for diagnostic purposes; the man died of exhaustion before the abscess could be opened. One death occurred in a case of fracture of the skull with brain symptoms in which the skull was trephined and depressed bone was elevated. One occurred in a child whose brachial artery had to be tied. It was a case of incised wound of the wrist which had occurred some days before admission and the hœmorrhage had been inefficiently checked. When the patient was admitted he had bled a good deal and was extremely anœmic and in a hopeless condition. He never rallied after the operation. One occurred in a case of chronic syphilitic laryngitis. The patient was brought to Hospital in a sinking condition and as a last resource tracheatomy was performed. The patient died soon after the operation. In one case abdominal paracentesis was done for ascites due to cirrhosis of the liver; but the disease continued and he died of exhaustion. In one case herniotomy was done and the sac and gangrenous omentum were tied and removed; he died of peritonitis. In one case of syphilitic disease of the tibia ending in necrosis, though the diseased bone was removed, the general condition was so bad that the patient did not gain any benefit from the operation and died of exhaustion caused by diarrhœa. Of the two deaths after amputations, one was a case of multiple injuries where both legs had to be amputated simultaneously. The patient did not survive the shock of the double operation; the other was a case of compound fracture of the left leg with dislocation of the ankle; here the leg was amputated and when the stump had all but healed gangrene suddenly set in, necessitating amputation of the thigh at the lower third. Gangrene again set in in the stump of the thigh and the patient died of exhaustion. He had a strong syphilitic taint which accounted for the gangrene.

All the operations were performed with modified Lesterian antiseptic precautions. Of the 110 major operations, the more important ones were in the following order:—(1) Amputations 16; of these 10 were of the upper extremity, including one of the arm, and 6 of the lower extremity, including one of the thigh, and one Syme's amputation. (2) Operation for stone 14; of these 11 were lateral lithotomies and 3 litholapaxies; of these 11 were cured and 3 remained under treatment. (3) Removal of tumours 12; of these one was cancer of the breast, one cancer of the lip, one nasopharyngeal polypus and one uterine polypus All

were cured except one, which remained under treatment. (4) Operations of necrosis and caries 8; of these one died and the rest were relieved or cured. (5) Piles 4; of these some were simply cut off and some treated by Smith's clamp and cautery; 2 were cured and 2 remained under treatment. (6) Hepatic abscesses opened by the knife 3; all were cured. (7) Forcible dilatation of stricture by Holt's method 2; both cured. (8) Dislocation of the hip reduced 2; one cured and one remained under treatment. (9) Complete excision of the elbow for necrosis 1; cure complete, and movement of arm very satisfactory. There were 17 cases of hœmatocle, most of which had turned into abscesses; these were opened and drained. All were cured.

7. Mortality and its Causes.—There were in all 281 deaths, or 9·2 per cent. to total treated. This percentage is slightly lower than that of the previous year. Of the total number of deaths 73 occurred within 24 hours, 56 within 4 days, and 152 above a week after admission. The large number of deaths within 24 hours and within 4 days shows how hopeless some of the cases must have been at the time of admission, and as a matter of fact that was the case. Some patients came in very often at the eleventh hour when their cases had been spoilt by native "vaids"; others were found lying in the streets and brought by the police almost moribund; others had left other hospitals and came to this after they had become worse after leaving those hospitals; and lastly, some who came, appeared as if they had made up their minds to totter to the hospital and lie down and die, their friends being only too thankful to be saved their funeral expenses. Every *serious* case was at once admitted, whatever his disease or circumstances, and no selection was made. I make this statement to account partly for this great mortality. The classes of patients in which the mortality was highest were Hindoo and Mahomedan beggars picked up in the streets, pilgrims landed in Bombay from foreign ports, sick passengers coming down by the numerous trains that arrive at the large station near this Hospital, who come to Bombay in search of food and employment or treatment. The principal diseases which caused the largest number of deaths were in the following order:—(1) diarrhœa, 51 deaths; (2) tubercle, 39 deaths; (3) dysentery, 24 deaths; (4) fever, remittent, 20 deaths; (5) pneumonia, 15 deaths; (6) tetanus, 11 deaths.

8. Vaccination.—Not practised in this Hospital.

9. Conduct of the Establishment.—Apothecary Mr. C. Easdon performed his duties during the year to my entire satisfaction. His zeal for work, his clock-work regularity in the performance of all his duties, his ability and his kindness to patients, continue unabated. The following Assistant Surgeons were most kindly placed under me by the Surgeon-General to do duty for short periods of time:—Assistant Surgeons Engineer, Kapadia, Bharucha, Mullan, Kothavalla, and Pocha. They gave me every satisfaction by their ability and devotion to work and proved a great help to me and to the House Surgeon.

The Steward, Mr. Balkrishna, performed his duties as usual very satisfactorily. There was never any complaint about the food or clothing on the part of the patients. He is a very zealous, painstaking and honest Steward. The Assistant Steward, Mr. Pestonjee Framjee, promises to be a very efficient and careful successor to Mr. Cassinath, who was lately invalided.

The head writer, Mr. J. F. Rodrigues, performed his clerical duties, which are heavy, very regularly, carefully, and efficiently.

The following Hospital Assistants did duty during the year as part of the regular establishment :—

1st class Hospital Assistant Nagoo Laxamon; 1st class ditto Peerajee Seewajee; 2nd class ditto Vittal Lingoo; and 2nd class ditto Narsapa Pochya. They performed their duties satisfactorily. Their habits were regular, and medical acquirements and character good.

The Nurses entertained last year did their work well.

10. GENERAL OBSERVATIONS.—The expenses as usual were kept as low as possible. The cost of diet per head per diem was 3 annas, against 3 annas and 4 pies of the previous year. The decrease was due to cheaper rates of provisions.

D. N. PARAKH, Surgeon-Major,
In charge Gokuldas Tejpal Hospital.

BOMBAY, 1*st January* 1892.

No. 8552 OF 1892-93.

Forwarded to the Standing Committee and Corporation for information.

H. A. ACWORTH,
Commissioner.

16*th July* 1892.

No. 4276. *Resolved*: "That the report of the working of the Gokuldas Tejpal Hospital for the year 1891 be forwarded to the Corporation."

No. 4277. *Resolved*: "That the following be referred to the Commissioner for favour of remarks :—Petition to the Corporation from Mr. Bechardas Morlidhur, dated 19th instant, on the subject of the want of roads, lighting, police protection and provision of drainage in Agripada."

Read petition, dated 18th instant, from Messrs. Janku Thackojee, Bhau Raghunath and other hay dealers having their stacks on Arthur Road, complaining that although they have been carrying on their trade thereat for the last 18 years, they were served with notices on the 8th March

last, from the Superintendent of Licenses, to the effect that their licenses will not be renewed. That proceedings were taken against the petitioners in the Police Court in June last, the effect of which is that they will be compelled to remove their stacks.

No. 4278. *Resolved*: "That the Corporation be recommended to inform Messrs. Janku Thackojee, Bhau Raghunath and other hay dealers, that the power of granting licenses and of refusing to grant licenses for the storage of hay is vested in the Municipal Commissioner, to whom the applicants can apply."

Read petitions to the Corporation and to the Committee, dated 20th instant, from Mr. Noor Mahomed Gangjee, alleging that no steps have yet been taken by the Municipality to put a stop to the illicit manufacture of tallow and to prevent the adulteration of ghee.

No. 4279. *Resolved*: "That the Corporation be recommended to inform Mr. Noor Mahomed Gangjee that, under the terms of the Municipal Act, the whole authority with regard to the question of licensing is vested in the Commissioner, and that on the 16th of June last, the Corporation referred applicant to that officer accordingly."

Read petition to the Corporation, dated 18th instant, from Sheik Janu Mahomed, late Sub-Inspector, Health Department, complaining of his dismissal from the service.

No. 4280. *Resolved*: "That the Corporation be recommended to inform Sheik Janu Mahomed that the power of dismissal in his case was vested solely in the Commissioner to whom the applicant can apply."

Considered letter No. 9038, dated 25th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to resubmit my letter No. 6938 of 24th June 1891, which the Standing Committee, under their resolution No. 3366 of 1st July 1891, kindly gave me leave to withdraw. I at that time saw some probability of acquiring at a cheaper rate than Anjeerbag, another property in the close vicinity, but I have had to give up all hopes of being able to do so. I have now therefore to revert to my original proposal for the purchase of the Anjeerbag, if it can be got for the sum shown in my letter of last year. The acquisition of burial ground for the Beni Israelites is of most pressing urgency, and the needs of the Mahomedan community cannot long be deferred.—I have, &c., H. A. ACWORTH, Commissioner.

No. 6938 OF 1891-92.

BOMBAY, 24*th June* 1892.

To THE MUNICIPAL SECRETARY.

SIR,—With reference to Corporation resolution No. 9236 of 15th December 1890, and Standing Committee's resolution No. 9279 of 17th idem, I have the honor to report as follows:—It has been impossible to dispose of the question earlier, as numerous points of difficulty unconnected with the financial side of it have arisen.

2. The acquisition of the ground referred to, including the building thereupon, the preparation and demarcation of it, and the cost of a road from the East end of Victoria Road to the North-East corner thereof, will cost approximately 4½ lakhs.

	Rs.
64,036 square yards, at Rs. 5 a yard... ...	3,20,180
Buildings	23,000
15 per cent. on value of lands and buildings ...	51,477
Road	26,000
Preparation, demarcation, &c.	20,000
Total ... Rs.	4,40,657

or say, Rs. 4½ lakhs.

3. A loan for miscellaneous works, including the laying of large water mains and the purchase of new pumping engines at Love Grove, will in all probability require to be raised in 1892-93. I suggest incorporating the amount specified above in this loan, and acquiring the ground in anticipation of sanction of the loan. The provision of fit and convenient places for the disposal of the dead is an obligation imposed on the Municipality by law, and sanction to a loan to carry out the requirements of the law cannot, therefore, be refused. The question is urgent for more reasons than one, and a settlement, that is the acquisition of this or other land, cannot be deferred till the date of the raising of the proposed loan. It is not an adequate statement of the case to say that no ground equally fit for the purpose can be found east of Mount and Mazagon Roads. No ground whatever that is suitable for a burial ground can be found in that quarter of the City except the Anjeerbag.—I have, &c., H. A. ACWORTH, Commissioner.

It was agreed that letters Nos. 6938 and 9038, dated 24th June 1891 and 25th instant, from the Commissioner, be printed on the minutes of this day's meeting and brought on for consideration at the next meeting.

The following return was read and *recorded* :—

Return of fires at Parel Cross Road, Motilal Petty Mill (Tardeo), Modi Bunder, Gilder Street, Null Bazar and Chinch Bunder Road, forwarded with the Commissioner's memorandum No. 8476, dated 19th July 1892.*

* *See* Appendix C.

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 24th July 1892.

No. 4283. *Resolved* : "That, as recommended by the Commissioner in his memorandum No. 9113, dated 26th instant, the Committee approve of his filing an appeal in the High Court, under the terms of Act 12 of 1888 of the Government of India, against the decision of the Chief Judge of the Small Causes Court in regard to the compensation awarded in the case of Sirdar Dilar Jung for land taken up for the improvement of Bruce Lane."

No. 4284. *Resolved* : "That the following be *recorded* :—Memorandum No. 9214, dated this day, from the Commissioner, reporting that, during the week ending 23rd instant, there was one case of burst of the 48" Tansa main on the Arthur Road, opposite the Gas Works, on the evening of the 18th idem. It was repaired on the 21st of the same."

No. 4285. Read and *recorded* the following :—Letter No. 1509, dated 25th July 1892, from the Chief Accountant, to the Commissioner :—

SIR,—In continuation of this office No. 1251, dated the 4th instant, I have the honour to report, for the information of the Standing Committee, with reference to their resolution No. 2969, dated the 29th ultimo, that a further lot of 4 per cent. Government Paper for Rs. 1,00,000 belonging to the Surplus Cash Deposit account was sold on the 23rd instant at $106\frac{13}{16}$ against the cost price $100\frac{9}{16}$ per cent.—I have, &c., SORABJI NAVAROJI COOPER.

Memorandum No. 9062 of 26th July 1892 as under :—

Forwarded to the Standing Committee for information.—H. A. ACWORTH, Commissioner.

No. 4286. *Resolved* : "That the following be *recorded* :—Memorandum No. 9213, dated this day, from the Commissioner, reporting, with reference to the resolution of the Standing Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 39,567-1-4—(1) of Rs. 4,317-9-6 from the new Sanitary Works Loan Deposit account No. 1, to the Municipal General Fund pass-book, on the 21st instant ; (2) of Rs. 13,649-15-8 from the 35 lakhs

* *See* Appendix B.

various Sanitary Works Loan Deposit account, to ditto on ditto; (3) of Rs. 1,624-9-2, from the 12 lakhs Drainage and Water Works Loan Deposit account, to ditto on ditto; (4) of Rs. 19,974-15-0 from the Municipal Building Fund Deposit account, to ditto on ditto."*

No. 4287. *Resolved*: "That, as applied for by the Commissioner in his letter No. 9217, dated this day, sanction be given to the acceptance by him of the tender of Messrs. Mistri, Bhedwar and Company, the lowest of the four tenders received, for the work of constructing latrines and urinals in various parts of Bombay. The amount Rs. 6,840·202 to be met out of the budget grant of Rs. 12,000, new works."

The consideration of petition to the address of the Corporation, dated 25th instant, from Praga Wala, Premabai, and others on the subject of their being prevented by the Police from selling boots and shoes on the footpath in the vicinity of Crawford Markets, was postponed for the present.

BOMBAY, *3rd August* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA K. BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 27th ultimo, were signed.

No. 4456. The seal of the Corporation was affixed to deeds of contract (1) with Mr. Tukaram Ranuji for the supply of 500 brass of road metal, and (2) with Messrs. Killick, Nixon & Co. for the supply of 500 tons of Hastings Hartley coal.

The question of the sealing of the following agreement was, on the application of the Commissioner, postponed :— Deed of agreement (in duplicate) between Mr. Tullockchand Manekchand and others, and the Corporation, securing to

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* The Chief Accountant reports to the Commissioner that the balances standing to the credit of the respective deposit accounts after effecting the above transfers are—(1) Rs. 6,07,401-12-3 (Rs. 6,06,808-8-3 in 4 per cent. Government paper for Rs. 6,20,000 and Rs. 593-4-0 in cash); (2) Rs. 15,03,204-9-0 (Rs. 14,99,866-12-0 in 4 per cent. Government paper for Rs. 14,54,100 and Rs. 3,337-13-0 in cash); (3) Rs. 2,54,118-12-0 (Rs. 2,31,118-12-0 in 4 per cent. Government paper for Rs. 2,35,000 and Rs. 20,000 in cash); (4) Rs. 8,00,000 in 5 per cent. Municipal debentures at par.

the Corporation the right to acquire, at any future time, the set-back of property of which Mr. Tullockchand Manekchand and others are the trustees, and situate at Parel (Kalbadevi) Road.

No. 4457. *Resolved* : "That, as applied for by the Commissioner, in his memoranda Nos. 9337 to 9340, dated 28th ultimo, Nos. 9584 and 9585, dated 30th idem, and Nos. 9673 to 9678, dated 1st instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.		Where.
Mr. Virji Lukdir ...	...Building at	Gilder Street.
„ Guya Prasad ...	... Do.	do.
„ Ratansi Gowan Natha	... Do.	Foras Road.
„ Gangaram Raghoji	... Do.	Gilder Street.
„ Shaik Mulkafelly...	... Do.	Dharavi Road.
„ Ganpat Natyaba Lovar	... Do.	Charni Road.
„ Bhariman Punshil	... Do.	Ghorupdeo Road.
„ Raghu Babaji ...	... Do.	Kamathipura 2nd Street.
„ Narayen Vittoo ...	... Do.	Gilder Street.
„ Putlaji Bhimjee ...	... Do.	Parel Tank Road.
„ Dadabhai Nowroji	... Do.	Gowalia Tank Road.
„ Virji Dayal ...	... Do.	Mahim Bazaar Cross Road."

No. 4458. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 9929, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 4459. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 9336, dated 28th ultimo, sanction be given to his filing a suit in the High Court, against Hadji Ebrahim Hadji Aboo, for the purpose of requiring him to remove the encroachments made by him on the land occupied by the Tulsi pipe line at the junction of Fergusson Road."

No. 4460. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 9356, dated 28th ultimo, sanction be given, under the terms of section 185 of the Municipal Act, to his compounding with commission stable dealers, as per the following statement, for the payment, during the current year, of lump sums, in lieu of the taxes which they would otherwise be liable to pay under section 180 of the said Act.

"That any dealer having stables in which horses are kept for sale on commission, or otherwise, be charged in the same way on the principles laid down in the Commis-

sioner's letter No. 17581, dated 15th November 1890, and as sanctioned by the Standing Committee's resolution No. 8405, dated 19th idem."

No.	Ward.	Ward No.	Name of Stable-keeper.	Total No. of horses that can be accommodated.	Amount of Tax to be charged at 8 annas per stall.
1	2	3	4	5	6
					Rs. a. p.
1	E.	3099-3112	Umar Jamal Vuyani	379	189 8 0
2	„	3113-3130	Do.	238	119 0 0
3	„	3229	Karimkhan Dayakhan	16	8 0 0
4	„	3230	Gulam Nabi	16	8 0 0
5	„	3265-81	Suleman bin Dawood & Co.	624	312 0 0
6	„	3283-93	Do.	380	190 0 0
7	„	3839-3842	Ali bin Amar	595	297 8 0
8	„	87	Molvi Sahib	14	*14 7 0

Read letter No. 9255, dated 27th ultimo, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honor to forward a letter, No. $\frac{W}{2111}$ of 14th instant, from the Deputy Executive Engineer, Water Works, and to say that I concur with the views therein expressed. I would, therefore, request sanction to the establishment proposed which can be paid for out of savings which have accrued on the Tansa Water Works establishment.—I have, &c., H. A. ACWORTH, Commissioner.

Letter No. $\frac{W}{2111}$ of 14th July 1892, to the Commissioner :—

SIR,—I have the honor to point out that no provision has yet been made for any office establishment for the Tansa Department from the 1st November next to the 28th February 1893—four months. During this period the duct contractors continue to be responsible for maintenance and there will no doubt be a considerable quantity of work. The present staff of this office will be quite new to the Tansa records, both as to correspondence and drawings, and having regard also to the extra work and necessary confusion during this period, which are likely to occur owing to removal to the new offices, I think it will be found necessary to retain :—The head clerk, on Rs. 150 ; 1 clerk, Rs. 50 ; 1 draftsman, Rs. 40 ; 2 poons at Rs. 10 each, Rs. 20—total Rs. 260 × 4 = Rs. 1,040, for these 4 months.

*In this there is not a single horse at present, but it is intended to be used as a commission stable.

2. The total cost would be Rs. 1,040, and although I cannot at this stage say definitely, yet I believe the savings on Water Works establishment will, by the 1st November, have aggregated to the required sum.—I have, &c., S. TOMLINSON, M. INST. C. E., Deputy Executive Engineer, in charge Water Works.

No. 4461.

Resolved: "That, as applied for by the Commissioner, in his letter No. 9255, dated 27th ultimo, the Corporation be recommended to sanction the following establishment being retained in connection with the Tansa Water Works, for a period of 4 months, from 1st November 1892 to 28th February 1893, at a total cost of Rs. 1,040, *viz.* :—Head clerk on Rs. 150 per mensem, 1 clerk on Rs. 50 ditto, 1 draftsman on Rs. 40 ditto, 2 peons on Rs. 10 each, Rs. 20—total Rs. 260 × 4=Rs. 1,040. The amount to be paid out of savings which have accrued in the grant for the Tansa establishment."

Read letter No. 9436, dated 28th ultimo, from the Commissioner, to the Secretary, as under :—

SIR,—Since the resignation of the late Superintendent of Workshops, Mr. W. C. Rowe, on 12th February last, I have had under my very serious consideration the question whether it is to the advantage of the Municipality to maintain that establishment in the future on the scale on which it has been maintained in the past or not. Not very long after my assumption of the post of Commissioner I had the advantage of some discussion with Sir Charles Ollivant on this point, and I found he agreed with me that for workshop purposes the retention of a superintendent on Rs. 550 a month and free quarters was not required. I may add that I have for a long time entertained the strongest doubts whether the work done at the shops was as well, or as economically, done as it should be. But my predecessor I found, was met, in considering how to do away with the highly paid post of superintendent, with the same difficulty as confronted myself, *viz.*, the absolute necessity that the Municipality should entertain a mechanical engineer of high qualifications to supervise its large engineering dead-stock, the steam rollers, the engines of the Fire Brigade, the engines at Carnac Bunder, and, above all, the engines at Love Grove, which were under Mr. Rowe's immediate control. The supervision of the Love Grove engines was by far the most critical and important of Mr. Rowe's duties, and must, in the same way, claim a dominating interest from any other officer who may have to succeed to his functions.

The Corporation are already incidentally aware that with the erection of the new engines at Love Grove will arise the necessity for the creation of a new appointment there, that of first engineer, and I believe this appointment may be made without any expense to the Corporation, and to the great advantage of its administration, by carrying into practical effect the opinion I have above expressed as to the superior claims of the Love Grove engines upon the attention of the chief mechanical engineer to the Municipality. In

short, instead of creating anew the appointment of Superintendent of Workshops, I would appoint a first Engineer at Love Grove on an adequate salary, in whom the former appointment should be merged. Mr. Rowe used to receive Rs. 500 per mensem, with Rs. 50 per mensem travelling allowance, and free quarters. For the first Engineer at Love Grove I would propose a salary of Rs. 400, with the same travelling allowance, the free quarters have already been sanctioned by the Corporation to be built. This officer, in addition to his duties at Love Grove, will have a supervisionary control over the Carnac Bandar pumping station and the Workshops. With a good foreman at the Workshops nothing more than a short daily visit will be required from the Engineer. But I propose at all events experimentally for a year, or perhaps two years, to restrict operations at the Workshops as far as possible to repairs and to place new constructive works in the hands of some private firm. Enquiries have been made of Messrs. Richardson & Cruddas and Messrs. Gahagan & Co., both well known to the Corporation. I beg to forward herewith a report, No. 833 of 25th May, from the Executive Engineer, on the subject, together with its accompaniments. They will probably convince the Corporation, as they have convinced me, that no definite arrangement can be come to with any private firm on the basis of the experience we at present possess. The course which suggests itself to me as the most practical and the most likely to lead to satisfactory results, is that in the coming year new constructive work should, as far as possible, and with the sanction of the Standing Committee, as required by law, be given out by contract, the Workshops confining themselves almost exclusively to repairs.

I purpose, therefore, in the ensuing budget to submit for approval the following proposals :—

(*a*). The appointment of a head engineer at Love Grove on Rs. 400 per mensem, plus Rs. 50 conveyance allowance.

(*b*). The abolition of the appointment of Superintendent of Workshops.

(*c*). The appointment of a head foreman at the Workshops on Rs. 100 per mensem.

I am not at present prepared to say whether any other reduction will be possible in the permanent scheduled staff of the Workshops, but I will endeavour to effect it.—I have, &c., H. A. ACWORTH, Commissioner.

No. 4462. *Resolved* : " That letter No. 9436, dated 28th ultimo, from the Commissioner, to the Secretary, be printed on the minutes of this day's meeting and brought on for consideration next fortnight."

Read the following, No. $\frac{W}{2335}$ of 26th July 1892, to the Commissioner :—

SIR,—I have the honor, in returning your No. 7970 of the 13th instant, to state that the result of enquiries as to Mr. Wacha's leeches has been :—

(1.) The leech, according to Mr. Wacha's statement, was forwarded to him by a European gentleman, name and address not given.

(2.) Upon further inquiry Mr. Wacha stated (letter to Municipal Secretary, dated 11th July,) that the friend who sent the leech observed that the occupier was Mr. J. Moore, Byculla.

(3.) Mr. J. Moore, Byculla, being found, stated that the leeches did not come from the tap of the house he resides in, but from another place in Haines Road.

(4.) The chawl referred to by Mr. Moore was found, and the tap from which the leeches came (the little girl into whose lota it came says, as I understand her, only one) was found to be an exposed tap in a courtyard of the chawl at the junction of DeLisle and Haines Roads. Around the tap is a pavement. It was stated that leeches had not been found in the water since these now under report, but upon examination, we found a hollow space under the pavement near the drain and the water pipe was slightly leaking. Here was a colony of leeches in the slimy mud.

We are not able to ascertain that any leeches have been obtained from any other tap in this locality.

2. Having regard to the spot under the pavement in which so many leeches had been found and where they have evidently lodged for some time, and only occasionally been observed, I am of opinion that the origin of this colony was not from the water-supply. I cannot prove what the origin was, but having regard to the proximity of the drain and to the large number of people who use the tap and pavement drain in common, I think it will be felt not unreasonable to suppose that the leeches have been bred externally and have then occasionally found their way into the water tap.

3. I do not think the leeches could get into the pipe when the water is on, but in this case there is a stop-tap in the courtyard under command, without reference to us or the occupeirs or ramoshi. The entry of leeches into the pipe will have been a natural and easy thing if at any time the pipe which is now leaking has been disconnected for repairs, the bend where the pipe turns up out of the pavement to the tap being in the mud where the leeches were found.

4. I regret that I cannot give a more convincing report, but when I state that up to the present we have never found leeches on our strainers or filters or in the reservoirs or pipes, I trust that it will be generally recognized that there is no cause for alarm in this respect on the evidence at present before us.—I have, &c., S. TOMLINSON, Deputy Executive Engineer, in charge Water Works.

No. 9440 OF 1892-93.

BOMBAY, 28*th July* 1892.

Copy forwarded to the Standing Committee for information with reference to their resolution No. 3393, dated 6th instant.

H. A. ACWORTH, Commissioner.

No. 4463.

Resolved: "That memorandum No. 9440, dated 28th ultimo, from the Commissioner, forwarding report from the Deputy Executive Engineer, Water Works, be *recorded*."

Read letter No. 9485, dated 29th ultimo, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour, with reference to Standing Committee's resolution No. 2613 of 22nd ultimo, to forward a return prepared by the Executive Engineer. No further allotment of funds is needed during the current year. I do not consider that the roads in B Ward suffer by comparison with the roads in any other part of the City.—I have, &c., H. A. ACWORTH, Commissioner.

List of Roads in B Ward entered for repair this year, 1892-93.

Name of Road.	Remarks.
1st Class Roads.	
Abdul Rahman Street...	Completed.
Ahmedabad Street	To be full patched.
Argyle Road	Half the road to be renewed with packing.
Babula Tank Road	Repairs in progress.
Bhusaval Street	To be full patched.
Broach Street	To be repaired.
Clive Road	To be full metalled.
Kurla Street	To be repaired.
Frere Road (part)	Completed.
Surat Street	To be repaired.
Thana Street	To be full metalled.
2nd Class Roads.	
Baroda Street	To be repaired.
Bhusaval Street	Do.
Kurla Street	Do.
Chinch Bandar Road	Repairs in progress.
Kalyan Street	To be full metalled.
Nasik Street	To be repaired.
Paedhoni Road...	Completed.
Raichor Street...	To be repaired.
Sholapur Street	Do.
Surat Street	Do.
Thana Street	To be full metalled.
3rd Class Roads.	
Clive Road 1st Cross Lane	To be full patched. }
Do. 2nd do.	Do. }
Do. 3rd do.	Do. } In progress.
Do. 4th do.	Do. }
Do. 5th do.	Do. }
Do. 6th do. (at the foot of Chinch Bandar overbridge)	To be repaired.
Jackeria Musjid Street...	To be full metalled.
Jail Road, North	To be repaired.
Do. South	Do.
Do. West...	Do.
Umarkhari Road	To be full metalled.
Paedhoni Road...	Completed.

Note.—The principal roads in Mandvi were entered for full metalling this year, but as the house drainage connections will probably recommence in October and last till March, the repair of these roads has been deferred to next year, and the side streets between Argyle Road and Frere Road taken in hand instead. The Mandvi roads with a little repair will last fairly well till next March.

No. 4464. *Resolved*: "That letter No. 9485, dated 29th ultimo, from the Commissioner, be *recorded*."

Resolved: "That the following be *recorded*:—Letter No. 9649, dated 30th ultimo, from the Commissioner, reporting the sale of the following rights for cutting grass, cutting jungle dead trees, cultivating ground, removing tad and palm leaves and taking fruits from trees, &c., from the Municipal ground on both sides of the Tansa pipe line between Ghat Kopar siphon head and Dadar Road, for the year ending 30th June 1893, *viz.*:—Lot No. 1, land between siphon head at Ghat Kopar and the north boundary of the Municipal kutchra ground at Kurla, to one Dooma Paulo Mattra, for Rs. 44; lot No. 2, land between the south boundary of Khan Bahadur Jamsetji D. Wadia's Mahal salt works and the point where the Tansa pipe crosses Matunga Road, to Mr. Sittaram Luximan, for Rs. 14; lot No. 3, land between Matunga Road and Naigam Cross Road near Naigam Tank, to one Cristna Gungaji Bhasker, for Rs. 150; and lot No. 4, land between Naigam Road and the point where the Tansa pipe goes under Dadar Road, to one Luxmon Govind, for Rs. 125."* No. 4465.

Resolved: "That the following be *recorded*:—Letter No. 9627, dated 30th ultimo, from the Commissioner, reporting that he has sold the right of tapping date trees at the following places for the year ending 31st July 1893, *viz.*:—(1) for tapping 15 date trees on Malabar Hill Reservoir to one Dhunjibhoy Dorabji for Rs. 37, and (2) for tapping 20 date trees at Moree Road, Mahim, to the same man for Rs. 46." † No. 4466.

Proposed by R. G. Oxenham, Esq., seconded by Grattan Geary, Esq.—

Resolved: "That letters No. 6938, dated 24th June 1891, and No. 9038, dated 25th ultimo, from the Commissioner, be forwarded to the Corporation, with reference to their resolution No. 9236, dated 15th December 1890, and the resolutions of the Committee, Nos. 3903 and 5756, dated 15th July and 26th August 1891, respectively, with a recommendation that the Corpo- No. 4467.

* These rights were sold for the first time this year.
† These rights were not sold last year.

ration sanction the acquisition of ground at Unjir Bagh, admeasuring 64,036 square yards, or thereabout, for the disposal of the dead of the Mahomedan and Beni Israel communities, respectively, and the carrying out of the other works mentioned in the Commissioner's letter, at a sum not exceeding Rs. 3,75,000.*

"That, pending the raising of a loan, advances not exceeding Rs. 3,75,000 be made from available funds, such advances being hereafter adjusted to the debit of the loan when raised." †

Amendment, moved by A. G. Viegas, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

"That a Sub-Committee be appointed to advise the Standing Committee on the financial aspect of the proposed purchase of Unjir Bagh."

Withdrawn.

Amendment, moved by Kaikhosro N. Kabraji, Esq., seconded by K. M. Shroff, Esq.—

"That the consideration of the proposed purchase of Unjir Bagh be postponed for one month, and that in the meantime the Commissioner be asked to ascertain whether the land can be purchased for less than Rs. 5 per yard."

Withdrawn.

The original motion, as amended, was then *carried* (with one dissentient).

The following return was read and *recorded* :—

Return of fires at Lady Jamsetji Road (Mahim), Memonwada (Old Nagpada) and Musjid Bundar, forwarded with the Commissioner's memorandum No. 9669, dated 30th July 1892. ‡

The following statement § was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 31st July 1892.

Resolved : "That the following be *recorded* :—Memorandum No. 9746, dated 2nd instant, from the Commissioner, forwarding report from the

No. 4469.

* The figures Rs. 3,75,000 were inserted instead of Rs. 4,50,000, after discussion of the amendments.

† *See* Proceedings of the Standing Committee, dated 27th July 1892.

‡ *See* Appendix C. § *See* Appendix B.

Executive Engineer, Tansa, stating that there was no case of burst on the Tansa line during the week ending 30th ultimo, but that a portion of the lead from a joint of the Tansa 48″ main on the Parel Road was forced out on the 26th idem, and that the repair was completed on the 28th of the same."

BOMBAY, 10*th August* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C. S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 3rd instant, were signed.

No. 4770. *Resolved* : " That, as applied for by the Commissioner, in his memoranda Nos. 10070 to 10073, dated 6th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.		Where.
Mr. Balkrishna Telly	... Building	at Bellasis Road.
,, Kopat Dalal	... Do.	do.
,, Morarji Goculdas ...	... Do.	at Parel, Government House Gate Road.
,, Kisonlal Chimanlal ...	... Do.	at the junction of Clare and Ripon Roads."

No. 4771. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 10315, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 4772. *Resolved* : " That the following be *recorded* :—Letter No. 10002, dated 5th instant, from the Commissioner, reporting that he has entrusted the work of constructing seven wooden meat-vans to Messrs. Richardson & Cruddas, whose tender was the lowest of three, at a cost of Rs. 495 each. The amount to be met out of the grant of Rs. 3,710, provided in the current year's budget for the same."

Resolved: "(1.) That the following be *recorded*:—Letter No. 9963, dated 5th instant, from the Commissioner, reporting that it was found necessary to fit wrought-iron strengthening clamps to the Tansa 48″ pipes on the overbridge crossing the Railway lines at Ghatkopar and to provide flooring for the portions of the bridge open above the rails, at a cost of Rs. 3,860, which work was entrusted to Messrs. Richardson & Cruddas, who manufactured and erected the bridge. The cost to be met out of the provision for Tansa works from Ghatkopar to Bombay.

No. 4773.

"(2.) That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders, which would otherwise have been necessary, as Messrs. Richardson & Cruddas manufactured and erected the bridge, and to avoid difficulties in fitting in the new work with the old work, the additions were entrusted to them."

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 10083, dated 6th instant, sanction be given to the printing off of 150 copies of the appendices to the report of the Water Works Department for 1891-92, at a cost of Rs. 250. The amount to be debited to the Water Works contingent grant."

No. 4774.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 9990, dated 5th instant, sanction be given to a notice being issued, under section 381 of the Act, requiring Mr. Khooshal Nanji to drain off foul and stagnant water from the low ground owned by him at Chikalwadi, Tardeo, and to fill in the same to the satisfaction of the Commissioner."

No. 4775.

Considered the following :—

No. 1598 OF 1892-93.

BOMBAY, *3rd August* 1892.

TO THE MUNICIPAL COMMISSIONER.

SIR,—With reference to the Standing Committee's resolution No. 166 of 6th April 1892, I have the honour to forward the accompanying two lists, marked A and B, showing the grants for the past official year, payable out of current revenue and loan funds respectively, which remained unexpended before the close

of that year, but which will probably have to be spent during the current year, and to request the favor of your obtaining formal sanction of the above body to the renewal of the same.

2. From list A it will be observed that the liabilities on account of certain budget heads payable during 1892-93 out of current revenue aggregate Rs. 5,44,727-14-1, against the lapsed grants of those heads amounting to Rs. 6,72,007-9-3, and that the saving of Rs. 1,27,279-11-2 has, along with the lapsed grants of other budget heads not required to be wholly or partially renewed, helped to increase our surplus cash balance.

3. It may, however, be mentioned that the above amount of the lapsed grants requiring renewal is less than that renewed last year on account of the previous year by Rs. 4,753-10-6, and that there would have been a further material decrease, had not the amount of the unpaid interest on our different loans at the end of the past year exceeded similar outstanding at the end of the previous year by Rs. 89,290-0-4.

4. The amount of outstanding interest entirely depends upon Municipal bond-holders, some of whom very often do pot regularly present their bonds to the Bank for payment of interest as such interest falls due. I have, however, requested the Bank authorities to call upon large holders to draw their interest six monthly with a view to keep the amount of the outstanding interest to as low a figure as practicable in future.

5. I further beg to state that in addition to the lapsed grants aggregating Rs. 27,077-0-1 on account of the maintenance of the Victoria Gardens, as shown in list A, there was a further sum of Rs. 17,851-5-10 available for re-appropriation with Corporation's sanction on garden improvements, out of the garden receipts, fees, &c., for the past two years (Rs. 9,127-9-5 for 1890-91 and Rs. 8,723-12-5 for 1891-92) which have been credited to the garden fund as decided in the Corporation's resolution No. 7057, dated 17th February 1890.

6. If you desire to spend the latter sum of Rs. 17,851-5-10 during the current year on any improvement works at the gardens, sanction of the Standing Committee and the Corporation will have to be obtained thereto.

7. The lapsed grants payable out of loan funds, &c., aggregate Rs. 34,73,863-13-0 as per list B.—I have, &c., SORABJI NAVAROJI COOPER, Chief Accountant.

No. 9970 OF 5TH AUGUST 1892.

Submitted to the Standing Committee for favor of sanction.—H. A. ACWORTH, Commissioner.

A.

LIST of lapsed Grants for 1891-92 (payable out of Current Revenue), which require to be renewed during 1892-93.

	Balance of the Grant lapsed.	Total Amount lapsed.	Amount to be renewed.	Total Amount to be renewed.	Savings on the Grant lapsed.	REMARKS.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Corporation and Standing Committee's Establishment.						
Section IV.—Contingencies, &c., Bills from Messrs. Thacker & Co. and Mr. Husonally Abdoolally and the *Times of India* for paper weights and inkstands supplied in February 1892 and for charges for binding files of Proceedings and printing Coat-of-Arms		2,660 1 11		996 6 8	1,663 11 8	Bills received after the close of 1891-92.
Assessment and Collection Department.						
Section I—Head-quarters Office—For cost of acting arrangements made during the absence of the 2nd Assistant Assessor who was allowed 60 days' privilege leave from 18th February 1892 and for pay for February 1892 due to a Registration Clerk who proceeded on 1 year and 4 months' furlough from 17th February 1892...		623 13 1		403 1 7	220 11 6	The pay-sheets were submitted in 1892-93.
Licensing Establishment.						
Section IV.—*Land Conveyance License Establishment*—Establishment, &c., charges for January and February 1892.		2,015 13 2		2,015 13 2		The statements of establishment and contingent charges for January and February 1892 have not yet been received.

Fire Brigade.														
Section II.—Rent, Repair. and Miscellaneous.—Stores and Stationery—Bills from the *Times of India* for printing charges for January and February 1892 and for cost of stores supplied by Messrs. Merryweather & Sons	1,068	9	2				457	6	11					Bills received after the close of 1891-92.
„ *III.—Purchase of Stock.*—One steam-fire engine...	9,500	0	0				9,500	0	0					The engines and manuals arrived in Bombay at the close of 1891-92 and were tested in 1892-93.
„ *IV.—Purchase of three steamers and two manuals*	31,500	0	0				31,500	0	0					
					42,068	9	2				41,457	6	11	611	2	3
Public Gardens.														
A.—Victoria Garden.														
Maintenance.														
Section I.—Establishment	299	9	11				299	9	11					
„ II.—Stores and petty charges	1,771	3	3				1,771	3	3					
„ III.—Seeds and Plants and labelling Plants and printing Catalogues.	360	9	10				360	9	10					
„ IV.—Monsoon repairs, painting seats, &c., and repairs to buildings &c.	952	14	7				952	14	7					
	3,384	5	7				3,384	5	7					
New Works.														
Special repairs and alterations to Victoria Garden Roads	496	9	2				496	9	2					
Wall and fencing round the Victoria Garden ...	1,322	10	0				1,322	10	0					
Quarters for the garden staff	381	9	2				381	9	2					
Laying 12″ stoneware pipes in the Victoria Garden	163	5	2				163	5	2					
Constructing Ostriches' shed in the Victoria Garden	100	7	11				100	7	11					
Carried over ...	2,464	9	5				2,464	9	5					
Carried over ...	3,384	5	7	47,368	5	4	3,384	5	7	44,872	11	11	2,495	9	5

	Balance of the Grant lapsed.	Total Amount lapsed.	Amount to be renewed.	Total Amount to be renewed.	Savings on the Grant lapsed.	REMARKS.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Brought forward ...	3,384 5 7	47,368 5 4	3,384 5 7	44,872 11 11	2,495 9 5	
Brought forward ...	2,464 9 5		2,464 9 5			
New Works—contd.						
Constructing Deer shed in the Victoria Garden.	15 8 0		15 8 0			
Do. Aquatic birds' cages	221 6 5		221 6 5			
Do. Cages for small mammalia ...	239 6 8		239 6 8			
Do. do. do. ...	52 10 4		52 10 4			
Do. Bears' cage	545 8 11		545 8 11			
Do. a wild beast's cage	3,970 1 11		3,970 1 11			
Cost of constructing a new bungalow for the Superintendent, Victoria Garden	11,030 5 1		11,030 5 1			
Erection of a refreshment room in the Victoria Garden	2,107 10 3		2,107 10 3			
Construction of a drain for the cages in the Victoria Garden	1,649 7 6		1,649 7 6			
Erection of a 3-chamber latrine on the water closet system in the Victoria Garden... ...	1,396 0 0		1,396 0 0			To be renewed to the credit of the Garden Fund for completion of works and improvements.
	23,692 10 6	27,077 0 1	23,692 10 6	27,077 0 1		
Engineer's Department.						
General Supervision and Miscellaneous Duties.						
Section I.—Superior Staff—For amount of acting allowances due to Messrs. Smith and James for February 1892...		1,019 5 9		666 10 8	352 11 1	The sanction of the Corporation and Government to the acting arrangements in place of the Executive Engineer who is on sick leave was received in April 1892.
Drainage A, Miscellaneous Drainage.						
Section II.—Inspecting Manholes and Sewers and cleaning Miscellaneous Drains and Gutters, Stores-Bills for hand lamps, &c., ordered out from England in 1891-92	373 2 4		373 2 4			Bills not yet received.

III.—Repairing and altering Miscellaneous Drains and Gutters ...	4,260 9 0		2,967 14 5				Repair works sanctioned in 1891-92 are in progress.
IX.—Altering Sewer arrangement in Falkland Road...	5,098 5 6		5,098 5 6				Works in progress. The sewer arrangement cannot be carried out until some Government property which intervenes is removed and land from certain private parties acquired.
B.—Maintenance of Love Grove Pumping Station.		9,732 0 10		8,439 6 8	1,292 10 7		
Section III.—Repairs to Machinery	836 15 4		836 15 4				Some of the bills for works entrusted to Messrs. Richardson & Cruddas are still to be received.
„ V.—Repairs to Buildings	337 18 7		337 18 7				Bills for repairs sanctioned in 1891-92 are to be received.
		1,174 12 11		1,174 12 11			
D.—Maintenance of Carnac Bunder Pumping Station.							
D.—Renewing the quarters of the Pumping Engine Staff ...		3,000 0 0		3,000 0 0			Work completed in 1892-93.
Water Works—Maintenance.							
Section IV.—A—Repairs, alterations and other works in connection with tanks, wells and fountains...	5,072 1 9		4,163 12 11				The alterations are in progress.
IV.—B—Repairs to Water Works buildings	3,585 8 6		3,585 8 6				Required for painting the roof of the Malabar Hill Reservoir filters and for charges for repairs executed last year, bills for which were not submitted during the past year.
V.—Repairs to Tulsi Main Embankment	22,072 0 8		22,072 0 8				Work completed in July 1892, except earthwork, contract for which is still to be let.
V. A.—Repairs to Vehar Main Embankment between Sion and Kurla	9,841 11 11		4,249 11 5				Work completed in June 1892.
		40,571 6 10		34,071 1 6	6,500 5 4		
Carried over ...		1,29,942 15 9		1,19,301 11 4	10,641 4 5		

	Balance of the Grant lapsed.	Total Amount lapsed.	Amount to be renewed.	Total Amount to be renewed.	Savings on the Grant lapsed.	REMARKS.
	Rs. a. p	Rs. a. p.	Rs. a p.	Rs. a. p.	Rs. a. p.	
Brought forward ...		1,29,942 15 9		1,19,301 11 4	10,641 4 5	
Streets and Buildings.						
Public Lighting Branch.						
Section II.—Gas lighting—F. Contingencies—For cost of 7 dwarf columns and lanterns to be supplied and erected on Ollivant Bridge and for cost of 2 automatic pressure gauges	3,410 13 7		1,179 0 0			One of the pressure gauges has been supplied in 1892-93. The other is still to be supplied. The columns and lanterns are in course of erection.
„ III.—Kerosine oil lighting—B. Contingencies—For cost of providing masonry foundations to kerosine oil lamp posts	5,022 12 2	8,433 9 9	3,022 3 5	4,201 8 5	4,282 6 4	The annual repairs Contractor's bill was received in 1892-93.
Road Watering.						
„ V.—New water tanks and Persian wheels		8,227 1 9		8,227 1 9		Several water tanks and Persian wheels have been in bad condition for some time, but by occasional repairs they have been made to last until the present time. This year, however, many renewals will have to be made, and hence it is necessary that the grant be renewed. There is no grant for the purpose in this year's Budget.

Road Repairs and Maintenance.						
Section III.—Paving footpaths	38,270 8 4		38,270 8 4			Work in progress.
" IX.—Road side trees, fencing, &c., for cost of new tree guards supplied by Messrs. Richardson and Cruddas	1,176 11 0	39,447 3 4	1,155 0 0	39,425 8 4	21 11 0	Bills received in 1892-93.
Street Improvements.						
Section I.—Compensation for ground taken up.	55,635 8 0		35,055 8 6			The grant is required to be renewed on account of unpaid compensation for plots of lands acquired for street improvement.
" III.—Purchase of number-plates and street-boards	4,551 2 8	60,186 11 2	4,551 2 8	39,606 11 2	20,580 0 0	Contracts entered into, but bills not preferred as the plates and boards have not been supplied.
New Works.						
Storm-water drain in Juggonath Sadashiva Street	1,634 12 4		1,634 12 4			Work completed in 1892-93.
Six cast-iron man-hole frames and covers on 12" pipe drain at Matharpakadi	291 0 0		291 0 0			Do. do.
Storm-water connection at the junction of DeLisle and Arthur Roads	106 6 7		106 6 7			Work in progress.
Storm-water drain in Gorupdeo Road	376 6 7		376 6 7			Work completed. Bills for road repairs, &c., to be adjusted.
Chawl of 17 rooms at Love Grove	9,248 7 8		9,248 7 8			Work in progress.
Closing up with cast-iron the perforations in man-hole covers	3,776 6 1		3 776 6 1			Do.
Renewing side drain in Love Lane	282 8 6		282 8 6			Work completed in 1892-93.
Making fair weather connections of Agripada open drain with Ripon Road sewer	261 5 0		261 5 0			Work nearly completed.
Converting the chunam shed at Churney Road Chowki into a new Chowki	668 7 7		668 7 7			Work in progress.
Miscellaneous Drainage	1,464 12 10		1,464 12 10			Works sanctioned in 1891 92 are in progress.
Carried over ...	18,110 9 2	2,46,237 9 9	18,110 9 2	2,10,762 4 0	35,475 5 9	

	Balance of the Grant lapsed.	Total Amount lapsed.	Amount to be renewed.	Total Amount to be renewed.	Savings on the Grant lapsed.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Brought forward ...	18,110 9 2	2,46,237 9 9	18,110 9 2	2,10,762 4 0	35,475 5 9	
New Works—contd.						
Arrangements for flushing Parel and Bellasis Road Storm-water drain from Babula tank and Nagpada tank	1,984 8 8		1,984 8 8			Work in progress. There was not sufficient time in the last dry season to complete both the works. The flushing arrangements in connection with the Babula tank have been completed. Those in connection with the Nagpada tank will be undertaken after the rains and some subsidence of the sub-soil water.
Water entrances at different places	1,815 6 0		1,815 6 0			All the water entrances have been completed. The work of filling in portion of the Aitken Low Level sewer is in progress. Some charges for the water entrances have already been passed this year.
Filling and pitching slopes of portion of Haines Road which forms the boundary of the Storm-water Reservoir	4,593 2 5		4,593 2 5			Work not undertaken, pending consideration of Mr. Baldwin Latham's proposals as to Storm-water Drainage.
Altering connection of main drain with main sewer at Bellasis Bridge	114 9 4		114 9 4			Work completed, but accounts remain to be adjusted.
Ventilating shafts, Marine Lines, Mayo Road and Queen's Road	2,092 8 8		2,092 8 8			Work nearly completed and accounts remain to be adjusted.
Construction of 12" pipe sewer in extension of the Arthur Road 15" pipe sewer to Suparibaug Road	2,956 0 0		2,956 0 0			Work nearly completed and accounts remain to be adjusted.

Construction of 3 flushing tanks with automatic annular siphons for Mayo Road and Marine Lines pipe sewer	803	1	5			803	1	5				Do. do. do.
Latrines and urinals	36,222	15	7			25,422	13	0				Work in progress. In some cases sites for latrines and urinals have been objected to by persons residing in the locality and in other cases negotiations are proceeding in respect of land to be acquired.
Six-chamber latrine and six-chamber urinal at the junction of Falkland Road and Gilder Street	4,021	3	8			4,021	3	8				Work in progress.
Four-chamber urinal in 2nd Bhoiwada Street...	524	0	0			524	0	0				Do.
Four-chamber urinal at the corner of Khoja Street and Grant Road	480	0	0			480	0	0				Work in progress. The site selected for the urinal was objected to by the Manager of an Agiari in the neighbourhood. A new site has since been selected and the work is now taken in hand.
Latrine at Bandora Slaughter House	1,898	13	5			1,898	13	5				The work is completed, but some accounts remain to be adjusted.
New Night-soil Depôt at the north end of De Lisle Road...	15,984	7	9			15,984	7	9				Work in progress. The site proposed for the depôt was objected to, but a new site has now been selected and a contract let for the work.
Addition to latrines in Municipal Workshops store-yard	1,305	0	0			1,305	0	0				The work was modified, and it was decided in May 1892 that one native water system latrine and one European water closet should be erected in lieu of the additions at first intended.
Retaining wall at Walkeshwar Road	466	12	6			466	12	6				Work practically completed, but it is anticipated that some further work will be found necessary after the rains.
Carried over ...	93,372	8	7	2,46,237	9	9	82,572	6	0	2,10,762	4	0	35,475	5	9	

	Balance of the Grant lapsed.	Total Amount lapsed.	Amount to be renewed.	Total Amount to be renewed.	Savings on the Grant lapsed.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Brought forward ...	93,372 8 7	2,46,237 9 9	82,572 6 0	2,10,762 4 0	35,475 5 9	
New Works.—contd.						
Tank and hoses for the Arthur Crawford Market to be used in case of fire	9,294 0 0		9,294 0 0			Drawings and estimates have been prepared for tanks and hose at all the Municipal markets and will shortly be submitted for approval.
Bas relief and tympanum at the Arthur Crawford Market	4,240 0 0		4,240 0 0			The grant sanctioned for the work is insufficient.
Purchase of land for new Cross Road from Ripon Road to Byculla	1,355 7 0		1,355 7 0			All the land has been acquired, but some accounts remain to be adjusted.
Pointing with Indian patent stone the walls of the settling and distributing basins of the Bhundarwada Reservoir	40,687 6 0		40,687 6 0			Work in progress.
Lithographing copies of plans of water mains..	307 4 0		150 0 0			Bill received in May 1892.
Additional catch-water channels at Vehar ...	600 0 0		600 0 0			} Claims for compensation for land
Construction of a chawl at Vehar	1,551 3 9		1,551 3 9			} taken up not yet settled.
Construction of a stove or tank for dipping pipes at Chinchpokli	1,292 5 0		1,292 5 0			As there was no large quantity of old pipes requiring treatment the construction was delayed. The tank will shortly be needed, and its construction will now be taken in hand.
		1,52,700 2 4		1,41,742 11 9	10,957 6 7	
Public Health Department. Conservancy Branch.						
Section IV.—Repairs.—For metalling the yard of the Health Department stables in 10th Kamathipura Street and for repairs executed during 1891-92	6,247 8 8		1,203 5 4			Annual repairs Contractor's bills received in April 1892. The work of metalling the yard of the stables in 10th Kamathipura Street is in progress.

Section X.—Halalkhor Branch—E. Repairs—For metalling the yard of the Health Department stables in Khurshedji Suklaji Street and for repairs executed to different Night-Soil Depôt stables and chawls during 1891-92	5,154	1	0				1,459	10	9				Annual repairs Contractor's bills received in April 1892. The work of metalling the yard of the stables is in progress.
„ „ „ J. Cost of providing proper bathing and drainage arrangements to the chawl at Dadar	1,747	0	0				1,747	0	0				
				13,148	9	8				4,410	0	1	8,738	9	7	Work nearly completed.
Markets and Slaughter-houses.																
„ IX.—Repairs—For repairs executed to markets and slaughter-houses during 1891-92 for making alterations to the existing gates at the Pedder Market and for painting the machinery of the Crawford Market clock ...				4,128	7	10				1,056	2	11	3,072	4	11	Annual repairs Contractor's bills received in May 1892.
Infectious Deseases.																
Two disinfecting chambers				2,000	0	0				2,000	0	0				Work commenced in 1892-93.
Census				1,753	14	3				1,753	14	3				
Alterations in the Pydhowni Police Station. ...				328	0	0				328	0	0				Work is in progress.
Carried over...				4,20,296	11	10				3,62,053	1	0	58,243	10	10	

	Balance of the Grant lapsed.	Total Amount lapsed.	Amount to be renewed.	Total Amount to be renewed.	Savings on the Grant lapsed.	Remarks
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Brought forward...		4,20,296 11 10		3,62,053 1 0	58,243 10 10	
Education.						
School for Deaf and Dumb Mutes	150 0 0		150 0 0			The bill was received in April 1892.
Victoria and Albert Museum—Special repairs to the Museum	3,536 0 0		3,536 0 0			
		3,686 0 0		3,686 0 0		The work is in progress.
Hospitals, &c.						
Leper Asylum at Matoonga (Maintenance)—For clothing, &c., purchased for the inmates of the Asylum		2,060 0 2		1,798 10 0	261 6 2	The bill was received on 27th May 1892.
Cost of engrossing on vellum and of binding the Address of Condolence to Her Majesty the Empress of India on the death of H. R. H. the Duke of Clarence and Avondale and of telegraphing the purport of the Address.						
Bill from the *Times of India* for printing the Address		453 6 0		260 0 0	193 6 0	Bill received in April 1892.
Debt.						
Interest on Loans.						
Drainage Loan of 1878	16,862 8 0		16,862 8 0			
44 Lakhs Sanitary Works Loan	23,975 0 0		23,975 0 0			
7 Do. do.	19,112 8 0		19,112 8 0			
Tansa Water Works Loan...	1,18,264 12 6		51,264 12 6			The interest was not claimed during 1891-92.
Drainage and Water Works Loan of 12 lakhs...	12,050 0 0		12,050 0 0			
35 Lakhs various Sanitary Works Loan ...	46,648 12 6		45,067 8 4			
6 Per cent. Local Loans	97 14 3		97 14 3			
	2,37,011 7 3		1,68,430 3 1			
Repayment.						
Drainage Loan of 1878	8,500 0 0		8,500 0 0			Debentures for Rs. 8,000 have been paid off during 1892-93 and the balance has not yet been claimed.
		2,45,511 7 3		1,76,930 3 1	68,581 4 2	
Grand Total...		6,72,007 9 3		5,44,727 14 1	1,27,279 11 2	

B.

STATEMENT of lapsed Grants on account of different Loan Works for 1891-92, which require to be renewed during 1892-93.

	Balance of the Grant lapsed.	Total Amount lapsed.	Total Amount lapsed under each Loan.	Amount to be renewed.	Total Amount to be renewed.	Total Amount to be renewed under each Loan.	REMARKS.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
17 Lakhs Loan for Drainage (portion of the 27 lakhs loan).							
Pipe sewers	32,476 12 3			32,476 12 3			
Establishment and Contingencies	1,343 6 9			1,343 6 9			
44 Lakhs Sanitary Works Loan—Drainage Works.		33,820 3 0	33,820 3 0		33,820 3 0	33,820 3 0	
First Drainage Section—House sullage water without privy connections	3,47,731 1 11			3,47,731 1 11			
Automatic flushers at heads of gullies ...	5,570 0 0			5,570 0 0			
7 Lakhs Sanitary Works Loan.		3,53,301 1 11	3,53,301 1 11		3,53,301 1 11	3,53,301 1 11	
Drainage of the Fort			50,535 0 9			50,535 0 9	
Tansa Loan of Rs. 1 Crore and 47 Lakhs plus Rs. 1,70,000 sanctioned to be paid from premia.							
Tansa Water Works		7,745 8 1			7,745 8 1		
Tansa Water Works Opening Ceremonial ...		18,179 11 2			18,179 11 2		
12 Lakhs Drainage and Water Works Loan.			25,925 3 3			25,925 3 3	
Queen's Road House Sullage Water Connections			2,39,212 1 3			2,39,212 1 3	
Loan of 10,08,500 for Drainage and Water Works, Markets and Roads.							
Markets.							
New Market at Colaba	50,300 0 0			50,300 0 0			Including Rs. 3,240 for establishment.
Arthur Crawford Markets Extension	49,710 4 0			49,710 4 0			Including Rs. 3,000 for establishment.
Roads.		1,00,010 4 0			1,00,010 4 0		
Road through Naoroji Hill		2,63,800 0 0			2,63,800 0 0		Including Rs. 7,680 for establishment.
Agripada House Sullage Water Connections Loan of 2,48,000			3,63,810 4 0			3,63,810 4 0	
Agripada House Sullage Water Connections ...			1,15,282 14 0			1,15,282 14 0	Including Rs. 6,000 for establishment.
Carried over ...			11,81,836 12 2			11,81,836 12 2	

	Balance of the Grant lapsed.	Total Amount lapsed.	Total Amount lapsed under each Loan.	Amount to be renewed.	Total Amount to be renewed.	Total Amount to be renewed under each Loan.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Brought forward ...			11,81,836 12 2			11,81,836 12 2	
35 Lakhs Various Sanitary Works Loan.							
Water Works.							
Pawai Water Works	2,34,851 13 0			2,34,851 13 0			Including Rs. 2,31,661-0-6 for land.
Additional water mains	12,059 15 2			12,059 15 2			
Improvement Works at Malabar Hill Reservoir	5,934 4 10	2,52,846 1 0		5,934 4 10	2,52,846 1 0		
Roads.							
Roads and Streets in Agripada and elsewhere...	8,48,304 14 8			8,48,304 14 8			Including Rs. 6,491-9-10 for establishment.
Difference between the amount provided in the Loan of Rs. 10,08,500 for road through Naoroji Hill and the revised amount sanctioned for the same	68,148 0 0	9,16,452 14 8		68,148 0 0	9,16,452 14 8		
Drainage.							
Sewer flushing arrangements		12,567 8 0			12,567 8 0		
Markets.							
Bhuleshwar Market Extension	1,81,295 2 10			1,81,295 2 10			Including Rs. 2,280 for establishment.
Foras Road Market	50,000 0 0			50,000 0 0			Including Rs. 3,000 for establishment.
Labourers' Quarters in connection with Arthur Crawford Markets	22,700 0 0	2,53,995 2 10		22,700 0 0	2,53,995 2 10		

Other Sanitary Works.						
Health Department stables and quarters for Scavengers...	1,50,000 0 0			1,50,000 0 0		Including Rs. 6,000 for establishment.
Chawl for Halalkhores in Kharsetji Suklaji Street	73,681 7 9			73,681 7 9		Including Rs. 3,171-3-0 for establishment.
Purchase of land at Arthur Road	23,676 0 0			23,676 0 0		
		2,47,357 7 9	16,83,219 2 3		2,47,357 7 9	16,83,219 2 3
Municipal Building Loan of 8 Lakhs.						
Municipal Office Building			3,60,456 7 11			3,60,456 7 11
Works sanctioned out of Savings on former Loans.						
Construction of the residence of the Chief Inspector of Water Works	46,360 0 0			46,360 0 0		
Covering the storage basin of the Bhandarwada Reservoir and the construction of filters over it	44,597 14 4			44,597 14 4		
		90,957 14 4			90,957 14 4	
Main Sewerage, Parell	77,503 5 0			77,503 5 0		Including Rs. 7,760-4-9 for establishment.
Branch Pipe Sewers at Parell	20,852 0 0			20,852 0 0		
Arching over Main Drain at Arthur Road ...	18,000 0 0			18,000 0 0		
		1,16,355 5 0	2,07,318 8 4		1,16,355 5 0	2,07,318 8 4
Advances for works for which Loans are not raised.						
Laying 27" and 24" Mains from the Malabar Hill Reservoir to the Frere Fountain, Fort ...			18,838 8 4			18,838 8 4
Loan Works Establishment Fund.						
Establishment for House Sullage Water Connections, First Drainage Section			22,200 0 0			22,200 0 0
Grand Total...Rs.			34,73,863 13 0			34,73,863 13 0

Resolved: "That memorandum No. 9970, dated 5th instant, from the Commissioner, and letter No. 1598, dated 3rd idem, from the Chief Accountant, to the Commissioner, be printed on the minutes of this day's meeting and brought on for consideration after a fortnight."

Read letter, dated 5th instant, from Messrs. Shamsudin Sulemanji, Tyeballi Ebrahimji and others, requesting that the open drain on the west of Morland Road in the old Race Course district be closed, and complaining that the locality is in a most filthy condition, that there are no proper roads or streets, no lamps, no police supervision, and no dust-bins, and requesting that those defects be remedied.

No. 4776. *Resolved*: "That, in reply to their petition, dated 5th instant, Messrs. Shamsudin Sulemanji, Tyeballi Ebrahimji and others, residents of Agripada, be informed that there are considerable difficulties in the way of acquiring the land required for the construction of streets and drains in that neighbourhood, but that the Municipal Commissioner is doing his best to secure the ground in question."

No. 4777. *Resolved*: "(1). That the following be *recorded* :—Memorandum No. 10069, dated 6th instant, from the Commissioner, forwarding analyses of water, as under :—

Sample of unfiltered Tulsi water obtained from the Inlet Well, Malabar Hill Reservoir, on the 1st August 1892.

	Parts per million.
Free Ammonia	·04
Albumenoid Ammonia	·13

Sample of filtered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 1st August 1892.

	Parts per million.
Free Ammonia	·03
Albumenoid Ammonia	·09

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir, on the 1st August 1892.

	Parts per million.
Free Ammonia	·15
Albumenoid Ammonia	·16

Sample of Tansa water taken from the 27" main in Arthur Road, on the 1st August 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·08

"2. That the Health Officer be asked to express his opinion as to the reasons for the extremely bad quality of

the unfiltered water obtained from the settling basin of the John Hay Grant reservoir."

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 7th August 1892.

Resolved: "That the following be *recorded* :—Memo-
No. 4778. randum No. 10158, dated 9th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 6th idem."

Resolved : " That letter, dated this day, from Mr. Dinsha
No. 4779. E. Wacha, to the Secretary, on the subject of leeches found in drinking water, be *recorded.*"

No. 4780. Considered list of Outstanding Business, 1st August 1892.

Item No. 7.—The attention of the Commissioner drawn to the unsatisfactory condition of roads in the Mandvi Ward, and he asked to state whether it is possible to put them in order from the current year's budget provision.

Struck out, the report having been presented and disposed of last week.

BOMBAY, 17*th August* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON, H. A. ACWORTH, Esq., C.S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 10th instant, were signed.

The seal of the Corporation was affixed (1) to 3 attested duplicate debentures of the Municipal Loan of 1878, Nos. 2289, 3422 and 4211, of Rs. 500 each ; (2) to 12 do., Nos. 79, 169-176, 264-65, and 3066 NN of Municipal Sanitary Works Loan of 1885, of Rs. 500 each ; and (3) to 11 consolidated debentures, Nos. 660-661 NN, Rs. 1,000 ; Nos. 650-59 NN, Rs. 5,000 ; Nos. 1575-84 NN, Rs. 5,000 ; Nos. 3020-23 NN, Rs. 2,000 ; Nos. 3025-34 NN, Rs. 5,000 ; Nos. 3036-45 NN, Rs. 5,000 ; Nos. 3046-55 NN, Rs. 5,000 ; Nos. 3056-65 NN, Rs. 5,000 ; Nos. 3075-84 NN, Rs. 5,000 ; Nos. 3085-94 NN, Rs. 5,000 ; Nos. 3095-97 NN, Rs. 1,500, of Municipal Sanitary Works Loan of 1885.

* *See* Appendix B.

Resolved: "That, as applied for by the Commissioner, in his memoranda Nos. 10294, 10295 and 10296, dated 10th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

No. 4957.

Names of owners.		Where.
Mr. Pandurang Luximon	Building	at No. 68, Golanja Hill Road.
„ Mahomed Oosman	Do.	at Gilder Street.
„ Budlangan and Bai Janki Prasad.	Do.	do. "

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 10830, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 4958.

Resolved: "That, as applied for by the Commissioner, in his letter No. 10605, dated 13th instant, sanction be given to the payment of Rs. 105-11-9, for wages and travelling expenses of Workshops fitters engaged in dismantling the Pawai engines. The amount to be paid out of savings in the amount budgetted for salary of the Pawai Engineer."

No. 4959.

Read letter No. 10606, dated 13th instant, from the Commissioner, to the Secretary, as follows :—

SIR,—I have the honor to request that the Standing Committee will authorise me, under section 91 of the Municipal Act, to apply to Government to acquire 17,739·60 square yards of land situate at Agripada and bounded by red lines on the accompanying tracing under the Land Acquisition Act. The ground is required for roads and frontages in the Agripada District.

Bai Saraswatibai, the owner of the land, is willing to sell the ground to the Municipality, but as the property is a Hindu joint family property, the interest of all the parties concerned cannot be settled by private negotiations, and the Municipal Solicitors advise that the ground should be acquired under the Land Acquisition Act.

The cost can be met out of the 15 Lakhs Loan for roads in Agripada and elsewhere.—I have, &c., H. A. ACWORTH, Commissioner.

Resolved : "That, as applied for by the Commissioner, in his letter No. 10606, dated 13th instant, sanction be given to his applying to Government to acquire, under the Land Acquisition Act, 17,739·60 square yards or thereabout of ground, the property of Bai Saraswatibai, situate at Agripada, as shewn on plan marked 'A', dated this day, and filed in supplement to minute

No. 4960.

books, the said ground being required for the sites of roads and frontages for Agripada district. The amount to be paid out of the loan of 15 lakhs for constructing roads in that district and elsewhere."

Read the following :—

Letter No. 10654, dated 13th August 1892, from the Commissioner, to the Secretary :—

SIR,—I have the honor to request sanction of the Standing Committee to withdraw from proceedings instituted against various persons to recover expenses incurred in levelling, metalling, &c., Zaoba's oart last year. The work was undertaken as usual under section 489 of the Act, after the necessary notices had been issued, with the sanction of the Standing Committee, under section 305. It is found impossible to recover the expenses incurred, Rs. 4,396-7-8, because it is not found possible to prove that Zaoba's oart is a "Street" as defined in the Act, and the amount will have to be written off as may hereafter be proposed. The case is illustrative of the difficulty and risk of proceeding under section 305. It did not occur to any one, and certainly not to me, that there could be any doubt about Zaoba's oart being a private street. In a few years it will be necessary to put the road in order again and I need scarcely say after this experience that it will not be done by the Municipality.—I have, &c., H. A. ACWORTH, Commissioner.

Letter, dated 10th August 1892, to the Acting Executive Engineer, Municipality :—

SIR,—In continuation of our letters of the 28th ultimo and 6th instant, we have the honor to report that we have now *obtained* a copy of the award, dated 30th October 1879, under which the Zaoba's oart was partitioned between the two brothers, Gunpatrao Moroji Zaoba and Narayan Moroji Zaoba, and that this document appears to us to show almost conclusively that at that time (1879) the whole oart, including the common passage therein, was private property and was divided between the two brothers. Under these circumstances and having regard to the fact (if it be a fact) that there is a gate at the entrance of the oart which is said to be always closed at night, it seems to us that, unless you are able to produce the clearest evidence to establish that "the public have a right of passage or access or have passed and had access uninterruptedly for a period of 20 years" over the roads in question, it would be perfectly useless to continue the proceedings for recovery from the owners of the adjoining properties of the expenses incurred in repairing those roads.

We recommended therefore that in absence of such evidence as we have indicated we be at once authorised to withdraw the proceedings.

The case, as we have already informed you, stands postponed to the 12th instant, and we shall therefore be obliged by your inform-

ing us in the course of the day whether there is such evidence; if not, we propose, in order to avoid an order being made for payment by the Municipality of costs to such of the owners as appear by professional gentlemen to take upon ourselves to give notice to those gentlemen, that we shall apply for a further postponement pending the matter being reported to the Commissioner in view to being laid before the Standing Committee for the necessary sanction for withdrawal under section 517 (*j*) of the Municipal Act.—We have, &c.,

CRAWFORD, BURDER & Co.

After discussion it was—

No. 4961. *Resolved*: "That, in the opinion of the Standing Committee, the cases pending in the Court of Small Causes, regarding the recovery of the cost of the repairs of Zaoba's oart, should be proceeded with."

No. 4962. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 10592, dated 13th instant, the Committee approve of a notice being served, under section 381 of the Municipal Act, on Mr. Jagannathdas Goorbuxdas, requiring him to clean and pump out the well attached to his house No. 521, Old Nagpada, the water of which is very foul and not fit for drinking purposes."

No. 4963. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 10750, dated 16th instant, the Committee approve of a notice being served, under section 381 of the Municipal Act, on Mr. Ladha Ebrahim, requiring him to fill in with sweet earth the low-lying ground at the back of his house in Clerke Road, as the state of the said ground causes a very great nuisance."

No. 4964. *Resolved*: "That the Progress Report* up to the end of June 1892, of new works in course of construction, be laid on the table and brought on for consideration next week."

No. 4965. *Resolved*: "That the following be laid on the table:—Letter, dated 13th instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of receipts and disbursements at the end of each week for the month of July last and compared them with the general subsidiary ledgers and journals and found them correct. Forwarding summary and statements of their scrutiny of accounts."

* *See* Appendix D.

Resolved: "That the following be *recorded* :—Memo-
No. 4966. randum No. 10293, dated 10th instant, from the Commissioner, reporting, as required by the resolution of the Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 50,000 from the surplus cash deposit account to the Municipal General Fund pass book on 1st instant."*

Resolved: "That, with reference to letter, dated
No. 4967. 20th June last, from Mr. Gunpat Bhaisett, complaining of the condition of roads and lanes in Mahim, the want of drainage, want of Police supervision, &c., the Corporation be informed that from the enquiries which have been made there appear to be now no cause for complaint, and that the applicant should be informed accordingly."

Resolved: "That the following be forwarded to the
No. 4968. Commissioner for disposal and that the applicants be informed accordingly :—Letter, dated 11th instant, from Messrs. Dhondiba Krishnaji & Co., complaining of nuisance from the drains attached to properties Nos. 154 to 157 and 146 at Haines Road."

Resolved: "That the following be forwarded to the
No. 4969. Commissioner for favour of report and that the applicants be informed accordingly :—Memorandum from the Municipal Secretary, forwarding letter, dated 10th instant, from Messrs. Turner & Hemming, in respect of the damage alleged to be done to their client's (Mr. Nathoo Mulji) property No. 21—25, Vithalwady Cross Lane, by drainage operations."

Considered again letter No. 9436, dated 28th ultimo, from the Commissioner, on the subject of the re-organisation of the Workshop staff and the work to be done in the shops.

Proposed by the Chairman, seconded by the Hon'ble Mr. Fazulbhoy Visram—

"That letter No. 9436, dated 28th ultimo, from the
No. 4970. Commissioner, on the subject of the re-organisation of the Workshop staff and the work

* The balance standing to the credit of the above account after effecting the transfer amounts to Rs. 24,36,899-14-2, *viz.*—

In cash	...	Rs.	59,124 9 2
5 per cent. Municipal Debentures nominal value ...	...	„	17,66,500 0 0
And 4 per cent. Government Paper for Rs. 6,18,000	...	„	6,11,275 5 0
		Rs.	24,36,899 14 2

to be done therein, be forwarded to the Corporation for information, and that the proposals made by the Commissioner with regard to the appointments of a head Engineer at Love Grove and of a Foreman of the shops be included in the Budget estimates for next year."

On a division, the motion was *carried* by 7 votes *against* 3.

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 14th August 1892.

Resolved : " That, with reference to letter, dated 16th instant, from Messrs. Shamsuddin Sulemanji, Tyabally Ebhramjee and other residents of Agripada, on the subject of want of roads, Police supervision, lighting and dust-bins, the Corporation be recommended to inform them in the terms of the Committee's resolution No. 4776, dated 10th instant, *viz.*, that there are considerable difficulties in the way of acquiring the land required for the construction of streets and drains in their neighbourhood, but that the Municipal Commissioner is doing his best to secure the ground in question."

No. 4971.

Resolved : " That letter, dated this day, from Mr. Dinshaw Edulji Wacha, to the Chairman and members of the Committee, on the subject of leeches found in drinking water, be *recorded*."

No. 4972.

BOMBAY, 24*th August* 1892.

AT the Meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; A. G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner; the CHIEF ACCOUNTANT, the ACTING DEPUTY EXECUTIVE ENGINEER, Water Works; and the SECRETARY.

The minutes of the meeting held on the 17th instant, were signed.

The seal of the Corporation was affixed to deed of agreement between Haji Mahomed Rajak and the Corporation, securing to the Corporation

No. 5489.

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* *See* Appendix B.

the right to acquire at any future time the set-back of property situated at No. 95-101, Mody Street, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 25 per square yard, for any land shewn on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition.

The seal was also affixed to lease (in duplicate) of 450 square yards of ground at Charni Road, belonging to Government, occupied for a road metal depôt on a tenancy-at-will, on payment of Rs. 9-6-0 per mensem, or Rs. 112-8-0 per annum.

The seal was also affixed to deed of contract with Messrs. Warden & Co. for tile roofing the three wards of the Infectious Diseases Hospital at Arthur Road.

No. 5490. *Resolved* : "That, as applied for by the Commissioner, in his memoranda Nos. 11164 and 11165, dated 20th, and Nos. 11347 and 11348, dated 23rd idem, sanction be given under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission:—

Names of owners.	Where.
Mr. Hariba Tucaram...	...Building at Grant Road.
Shaik Abdula Karim...	... Do. at Gilder Street.
Mr. Gulam Hussein Hyderali ...	...No. 26 Temker Street.
Mr. A. Bulara	...Building at Chinchpokli."

No. 5491. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 11504, dated this day, sanction be given to the cutting off of water-connections as per list submitted therewith."

No. 5492. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 9970, dated 5th instant, sanction be given to the renewal of lapsed grants for 1891-92, amounting to Rs. 5,44,727-14-1 as per detailed statement A, accompanying the Chief Accountant's letter to the Commissioner No. 1598, dated 3rd idem.

"That sanction be given to the renewal of lapsed grants for the same period amounting to Rs. 34,73,863-13-0, payable out of loan funds as per statement B ditto ditto.

"That sanction be given to the renewal of the available balance of Rs. 17,851-5-10, out of the Victoria Garden receipts during the years 1890-91 and 1891-92, as per the Corporation's Resolution No. 7057, dated 17th February 1890."*

* *See* Proceedings of the Standing Committee, dated 10th August 1892.

Resolved : " That, as applied for by the Commissioner, in his letter No. 11168, dated 20th instant, sanction be given to the purchase of 300 tons Powell's Duffryn coal at Rs. 18-12-0 per ton and 500 tons Brynbos Hartley coal at Rs. 16-12-0 per ton, from Messrs. Killick, Nixon & Co., to be delivered at the Love Grove Pumping Station. The delivery in each case to be from the ship.

No. 5493.

"That under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as similar arrangements sanctioned by the Committee's resolutions Nos. 9755, dated 7th January 1891, and 921, 1453 and 4271 of 1892-93 for the purchase of coal, have been advantageous to the Municipality."

Resolved : " That, as applied for by the Commissioner, in his letter No. 10771, dated 16th instant, sanction be given to the purchase of 6" cast-iron pipe flanged, &c., from Messrs. Richardson & Cruddas, which were required for the opening ceremony of the Tansa Water-works at the rate of Rs. 6-8-0 per cwt."

No. 5494.

Proposed by R. G. Oxenham, Esq., seconded by Hurkisondas Narrotumdas, Esq.—

" That, as applied for by the Commissioner, in his letter No. 10977, dated 18th instant, sanction be given to the work of paving certain foot-paths with Indian patent stone being entrusted to the Indian Patent Stone Company, at the rate of Rs. 34 per 100 square feet, including concrete, provided that the work is maintained for 12 months after payment and provided also that the contract is not sub-let. The amount, Rs. 24,879, to be met out of the current year's Budget provision of Rs. 50,000.

No. 5495.

" That under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary as the Company are specially engaged in the manufacture of that stone."

The motion was *carried* by 8 votes *against* 2.

Resolved : " That, as applied for by the Commissioner, in his letter No. 11169, dated 20th instant, sanction be given under section 517 (*j*) of the Act, to a suit being filed in the Court of Small Causes against the owners of premises in Dukurwadi Lane for the recovery of Rs. 1,150-14-6, being the amount incurred in levelling and metalling the lane, which work was done

No. 5496.

by the Municipality after the owners had failed to comply with the terms of notice served on them under section 305 of the Act."

No. 5497. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 11212, dated 20th instant, sanction be given under section 172 (1) of the Act, to a special charge of Rs. 140 per month being made against the B. B. & C. I. Railway Company from 1st July last, for special halalkhore service rendered to their workshops and quarters at DeLisle and Carroll Roads."

In accordance with notice, it was proposed by R. G. Oxenham, Esq.—

No. 5498. "That the Standing Committee or some members of the Committee arrange a meeting with the Municipal Commissioner, and the Architect, in the new Municipal buildings at an early date."

The motion was seconded by A. G. Viegas, Esq., and *carried*.

It was agreed that the Commissioner be asked to arrange with Mr. Stevens, the Architect, for the inspection of the new building by the Committee on Wednesday, 31st instant, at 5 P.M.

No. 5499. *Resolved*: "That the following be referred to the Commissioner for favor of report:—Resolution of the Corporation No. 5147, dated 18th instant, as under:—"That the question of Mr. Shaisha R. Naidoo's offer of a drinking trough for cattle be referred back to the Standing Committee for fuller details."

No. 5500. *Resolved*: "That the following be referred to the Commissioner for favor of remarks:—Resolution of the Corporation, No. 5365, dated 22nd instant, as under:— That the following be forwarded to the Standing Committee and the Commissioner for remarks:— Letter No. 2556, General Department, dated 25th July last, from Mr. Under-Secretary Harvey, forwarding extracts paras. 7 and 8 of the Accountant-General's letter No. $\frac{Q\ A}{6\ 3\ 6}$, dated 11th April 1892, on the account system of the Municipality as disclosed in the Administration Report of the Municipal Commissioner for 1890-91."

No. 5501. *Resolved*: "That the following be forwarded to the Commissioner for information:—Resolution of the Corporation, No. 5359, dated 22nd instant, as under:—That the report of the Standing Committee on the proposed construction of a foot-bridge over the G. I. P. Railway at Byculla overbridge, forwarded with their

resolution No. 2967, dated 29th June 1892, be *recorded*, and that the Committee be requested to make the necessary provision for the cost of the work in the Budget estimates for 1893-94."

The further consideration of the Progress Report of new works in course of construction, up to the end of June 1892, was postponed till next week.

Read the following :—

No. 13708 OF 1892-93.

BOMBAY, 16*th August* 1892.

TO THE COMMISSIONER.

Memo.

GULLY FLUSHING.

There is no regular staff employed specially for gully flushing by the Health Department, but the following is done :—

1. In A ward in the English Bazaar section, 2 halalkhores and 3 bigaries from the ward staff are daily employed in washing and flushing gullies by hand by means of buckets.
2. In C Ward 5 bigaries are similarly engaged.
3. In E Ward the gullies of Kamathipura section are systematically flushed by hand buckets. 5 men are told off for this duty, and when not so occupied, scrape and sweep and clean the walls of the houses abutting the gullies and the gullies themselves, of the mud and filth which adheres, and which is the result of the habit of throwing refuse from houses into gullies.

The state of public health was such that before the rains this year I deemed it necessary to apply for the assistance of the Fire Brigade to help the Health Department to flush down the gullies of the Kamathipura and Nagpada sections of E Ward and portions of Mandvi in B Ward.

A steam fire engine was put at our disposal with hosemen who directed the action of the water while men from the Health Department swept down the gullies and house walls.

The gullies of these sections received a thorough cleaning and scouring, and I have no doubt with beneficial effect.

The gullies in Khetwadi and Choonabhatti sections of D Ward were flushed down by hand in the early part of July.

The Health Department has a portable force pump which is really a small manual fire engine. It was got specially for gully flushing and will be used regularly after the rains.

I am unable to give any idea of the quantity of water which is used by the Health Department in gully flushing.

I am of opinion that there should be, where necessary, systematic gully flushing, and I assume that with Tansa water available, the extra draw-off would not be of such an amount as to materially affect the general supply. I am not able to give any estimate of the probable amount of water which would be used, but perhaps 1 gallon per head might be taken as an approximate quantity.

T. S. WEIR,
Health Officer.

No. 10990 OF 1892-93.

BOMBAY, 18*th August* 1892.

Copy forwarded to the Standing Committee with reference to their Resolution No. 2299 of 15th June last.

H. A. ACWORTH,
Commissioner.

No. 5502. *Resolved*: "That memorandum No. 10990, dated 18th instant, from the Commissioner, forwarding report from the Health Officer on the subject of flushing the gullies between houses and the quantity of water used on this work be *recorded*."

Read the following, No. 4580 B of 1892-93, from the Acting Executive Engineer to the Commissioner :—

19*th July* 1892.

SIR,—I have the honour to report that on the night of the 13th instant at about 12-30 a. m., the rear bay, 37 feet in length and 6'-6" in breadth, of the premises No. 60-70, Kawasji Patel Tank Road, belonging to Mr. Vunmalidas Jivandas, collapsed, burying in the débris nine persons, six of whom were adults and three children. All these were removed alive having sustained only slight injuries. All the persons, except one baby, were taken out within 2½ hours after the accident. The baby had been thrown out of its cradle and was not found till 6 a. m. The whole premises consisted of two blocks of buildings (front and rear) connected by communicating galleries. The building consists of ground floor, 1st floor, 2nd floor and attic stories. The front block is 37 feet in frontage length and 47 feet in depth and the rear block was 37 feet in length and 13 feet in depth. The rear bays of the rear block abutting to the south side of the house gully, common to several houses, gave way. The house was a frame building and all such buildings depend upon posts for their safety. In this instance the posts in the rear wall were decayed (some very rotten posts were found) and the weight of the building was ultimately thrown upon the wall. This wall being founded upon a lower wall of Karel (littoral concrete) which had disintegrated (a great part is nothing but sand) could not withstand the pressure, and consequently the wall slipped into the house gully (the wall was not overturned) and this resulted in the collapse of the roof and floors at that part. The Karel wall was built up from the foundations to the level of the ground floor, about 2'-6" above the paving of the house gully. The building appears to be at least 30 years old. There was no complaint made to the Municipality of any dilapidated condition of the premises either from the tenants or the neighbours. The people state that before the accident they had not observed anything to create an apprehension of danger from the building.—I have, &c., JAMES W. SMITH, M.I.C.E., Acting Executive Engineer.

Statement of Houses or Portions of Houses which fell during the month of July 1892.

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of *Building.*	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties.		Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	Remarks.
										Persons injured.	Persons killed.				
							1892.					Rs.			
1	C	60-70	Kavasji Patel Tank Road.	Vunmalidas Jivandas.	House...	Nil.	10th July	Old age.	Rear portion.	Nil.	Nil.	...	Nil.	Nil.	
2	„	322-326	Duncan Road	Rustomji Maneckjee.	Shop ...	„	14th „	Ditto.	Roof ...	„	„	200	„	„	
3	G	512-514	DeLisle Road	Joas Braz Fernandez.	Chal ...	20 years.	9th „	Portion of the ridge was broken.	Portion ...	„	„	40	„	„	

No. B-5515 of 1892-93.

Forwarded to the Municipal Commissioner.

JAMES W. SMITH,
Acting Executive Engineer, Municipality.

16*th August* 1892.

No. 10948 of 18th August 1892.

Submitted to the Standing Committee for information.—H. A. ACWORTH, Commissioner.

No. 5503. *Resolved* : " That memorandum No. 10948, dated 18th instant, from the Commissioner, and the report from the Acting Executive Engineer, be *recorded*."

No. 5504. *Resolved* : " That the following be *recorded*:—Memoranda Nos. 10809 and 11349, dated 17th and 23rd instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the weeks ending 13th and 20th idem."

No. 5505. *Resolved* : " That the following be *recorded* :—Memorandum No. 10812, dated 17th instant, from the Commissioner, reporting, as required by the resolution of the Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 20,000 from the 12 Lakhs Drainage and Water Works Loan cash deposit account to the Municipal General Fund pass book on 10th instant.*"

No. 5506. The following return was read and *recorded* :—
Return of fires at Sewri Road (China Mill) and Jackeria Musjid Road, forwarded with the Commissioner's memorandum No. 10757, dated 16th August 1892.†

The following statement ‡ was laid on the table:—
Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 21st August 1892.

No. 5507. *Resolved* : " That the following be *recorded* :—Letter No. 11430, dated 23rd instant, from the Commissioner, reporting that he has entrusted the work of supplying earth for repairs to the Tulsi main embankment between Mahim and Bandora to one Mr. Govindrao Sadujee Mali at Rs. 3-8-0 per brass. The cost, Rs. 1,501-8-0, to be paid out of the grant of Rs. 35,000 for the work."

No. 5508. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 11397, dated 23rd instant, sanction be given under section 240 of the Municipal Act to the laying of drains under covered part of the Esplanade Hotel to connect the wash-hand basins, urinals and water closets on the ground floor of the hotel with the pipe drain in the passage between that building and the Municipal offices, under the conditions prescribed in the Standing Committee's Resolution No. 5961, dated 24th September 1890."

* The balance standing to the credit of the above account after effecting the transfer amounts to Rs. 2,31,118-12-0 in 4 per cent. Government Paper for Rs. 2,35,000.

† *See* Appendix **C**. ‡ *See* Appendix **B**.

Resolved: "That, as applied for by the Commissioner, in his letter No. 113-4, dated 22nd instant, the Committee approve of a notice under section 381 of the Municipal Act being issued on the Agents of the Sorab Woollen and Cotton Mills, calling upon them to carry out the following works, as the sullage and waste water from the mill premises north of the Dadar Station, B. B. & C. I. Ry., flows on ground adjoining the mill and causes a great nuisance thereon.

No. 5509.

(*a*) That the said Agents construct 3 settling tanks 30′×15′×6′ capable of holding about 20,000 gallons each and so arrange them that the water after settling in them will pass into the main mill tank.

(*b*) That the Agents convert the present open katcha drain into an open masonry drain 2′-6″×18″ through which the refuse water from the dyeing house will flow into the settling tanks.

(*c*) That the Agents connect the water from the settling tanks with the main mill tank by means of either iron or stone-ware pipes.

(*d*) That the mill authorities make good the danger done to the Municipal ground by filling it up with earth to the depth of 12″ or to whatever depth the sewage may have stagnated thereon."

Read the following, No. 14293 of 22nd August 1892, to the Commissioner:—

I ascribe it to the accumulation of deposit in the settling basin. The sample had much vegetable matter.

T. S. WEIR, Health Officer.

No. 11471 OF 24TH AUGUST 1892.

Forwarded to the Standing Committee for information with reference to their Resolution No. 4777 of the 10th instant.

H. A. ACWORTH, Commissioner.

Resolved: "That the following be *recorded*:—Memorandum No. 11471, dated this day, from the Commissioner, forwarding report from the Health Officer with reference to the Committee's Resolution No. 4777, dated 10th instant."

No. 5510.

Resolved: "That, in reply to their petition, dated 2nd instant, Messrs. Jagooji Hamantrao Kudum, Luxumon Waghooji and others be informed that the Corporation have already decided that the site at Thomas Street is a very suitable one for a market and that they have accorded their sanction to the construction of the building thereon accordingly."

No. 5511.

The consideration of memorandum No. 11462, dated 23rd instant, from the Commissioner, on the subject of the shifting of the Tansa water pipes at Kurla Creek was postponed till next week.

A letter, dated this day, from Mr. Dinsha E. Wacha to the Chairman and members, was read but not recorded.

BOMBAY, 31*st August* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, ESQ., G.G.M.C., *Chairman*.
BHALCHANDRA KRISHNA BHATAWADEKAR, ESQ., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, ESQ.; HURKISONDAS NURROTUMDAS, ESQ.; JAVERILAL UMIASHANKAR YAJNIK, ESQ.; K. M. SHROFF, ESQ.; R. G. OXENHAM, ESQ., M.A.; ACCACIO G. VIEGAS, ESQ., L.M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, ESQ., C.S., Commissioner; and the SECRETARY.

The minutes of meeting held on the 24th instant, were signed.

No. 5744. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Mistri, Bhedwar & Co., for the construction of latrines and urinals in various parts of the City; (2) with Mr. Narayen Kushaba, for piece work in laying branch pipe sewers and putting up cast-iron down-pipes and fittings in the first drainage section.

No. 5744 A. *Resolved* : "That, with reference to the Committee's Resolution No. 1904, dated 8th June last, sanction be now given, as applied for by the Commissioner, in his memorandum No. 11470, dated 24th instant, to his entering into agreements with Mr. Abdul Kurim and Mr. Narayan Kushaba, severally, instead of jointly, for the construction of masonry and other piece work, such as laying pipes, building chambers, &c., in connection with the carrying out of the first drainage section works, at schedule rates."

No. 5744 B. The seal was also affixed to deeds of agreement (1) between Mr. Venku Balu and the Corporation, securing to the Corporation the right to acquire at any future time the set-back of property situated at No. 39, Kamathipura Bazar Road, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 10 per square yard, for any land shewn on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition ; (2) ditto ditto with Sheik Gulam Husain in respect of property situate at Nos. 4—6, Mustan Tank Road, providing that when at any time after the expiration of five years from the date of this indenture his ground shall be required

by the Corporation, he shall not be entitled to receive any compensation in respect of either the land or the superstructure standing thereon.

The seal was also affixed (1) to 6 attested duplicate debentures of the Municipal Sanitary Works Loan of 1885, Nos. 238 NN, 241 NN, 1120 NN, 1121 NN, 1122 NN, and 1123 NN, of Rs. 500 each ; and (2) to 5 consolidated debentures of ditto, No. 1762-81 of Rs. 10,000 ; No. 1782-1801 of Rs. 10,000 ; No. 1802-21 of Rs. 10,000 ; No. 1822-41 of Rs. 10,000 ; No. 1842-47 of Rs. 3,000.

No. 5745. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 11609, dated 27th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structure built without permission :—

Name of owner.	Where.
Bai Sonabai, Pestonji Damakia, or Mr. Dhunjibhai Kikabhai.	Building at No. 33, Bomanji Lane."

No. 5746. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 12028, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 5747. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 11462, dated 23rd instant, sanction be given to the work of shifting the Tansa water pipes at the Kurla creek being entrusted to Mr. Mahomedally R. Bhaijibhai at the rate of Rs. 35 per pipe. The total amount, Rs. 2,975, to be met out of the grant for pipe works between Ghat-koper and Bombay."

No. 5748. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 11583, dated 25th instant, the Committee approve of his applying to Government to acquire, under the Land Acquisition Act, 1,822·50 square yards, or thereabout, of land situate at Sankli Street, and owned by Mr. Jamsetji N. Cabinetmaker, as shown on plan marked ' A ', dated this day, and filed in supplement to minute books, the said ground being required for Fire Brigade head-quarters. The cost to be paid out of the 4½ lakhs loan to be raised for the construction of such quarters."

Considered the following :—

BOMBAY, 31*st August* 1892.

To THE CHAIRMAN OF THE STANDING COMMITTEE.

SIR,—On behalf of the House Connections Committee, I have the honour to request the Standing Committee to recommend the Corporation to sanction the grant of Rs. 10,000, in order to pro-

vide for the cost of a series of experiments to test the relative merits of certain recommendations made by the principal experts examined on the question of connections. The cost to be debited to the grant for House Connections.—I have, &c.,

JAVERILAL U. YAJNIK, Chairman.

Proposed by Colonel Wilson, seconded by Bhalchandra K. Bhatawadekar, Esq.—

No. 5749. "That, on the application of the Committee appointed to inquire into the question of house connections for a grant, the Corporation be recommended to sanction the expenditure of Rs. 5,000 (from the grant for carrying out the connections) in order to provide for the cost of a series of experiments to test the relative merits of certain recommendations made by the principal experts examined on the question of connections."

Carried.

Read letter No. 11789, dated 29th instant, from the Commissioner, to the Secretary, as under:—

SIR,—I have the honour to state that it is necessary to provide a depôt for storing kerosine oil and other materials in connection with kerosine oil lighting in a secluded locality where risks from fire may be at a minimum. The portion of the cement depôt at Bellasis Bridge which is used for the purpose at present is so small that a large number of cases have to be stored in the open shed outside. This is a very unsuitable arrangement and cannot be pronounced safe.

2. I request, therefore, the favour of the sanction of the Standing Committee and Corporation to my constructing a depôt or godown on Municipal ground at Bellasis Bridge at a cost of Rs. 5,139 as per accompanying estimate, which can be met from the savings out of the current year's grant for kerosine oil lighting.—I have, &c.,

H. A. ACWORTH, Commissioner.

Resolved: No. 5750. "That, as applied for by the Commissioner, in his letter No. 11789, dated 29th instant, the Corporation be recommended to sanction the expenditure of Rs. 5,139 for the construction of a depôt or godown on the Municipal ground at Bellasis Bridge for the storage of kerosine oil and other materials required in connection with kerosine oil lighting.

"The cost to be paid out of savings in the budget grant for such lighting."

Considered the following:—

No. 1743 OF 1892-93.

BOMBAY, 20*th August* 1892.

TO THE COMMISSIONER.

SIR,—With reference to the then Town Council's resolution No. 1444, dated 22nd December 1886, I have the honour to forward herewith 11 statements, marked A to K, which embody all the information required in the above resolution.—I have, &c., SORABJI NAVAROJI COOPER, Chief Accountant.

A

Works sanctioned out of

Nature of Loan Works.	Revised Estimated cost of each work.	Amount of Loan sanctioned.	Amount of Loan actually raised.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Main Sewer	4,94,272 0 0		
Pipe Sewer	3,75,536 0 0		
Outfall Sewer	2,56,585 0 0		
New Pumping Station	1,91,741 0 0		
One pair of engines			
Establishment...	3,81,866 0 0		
Contingencies			
	17,00,000 0 0	17,00,000 0 0	16,94,000 0 0
Kamathipura Works...			
Clerke Road Sewer			
	17,00,000 0 0	17,00,000 0 0	16,94,000 0 0
Less—Transferred to Bhandarwada Loan as per Municipal Commissioner's No. 7617 of 14th September 1887 adopted by the Town Council and Corporation...	31,209 0 0	31,209 0 0	31,209 0 0
	16,68,791 0 0	16,68,791 0 0	16,62,791 0 0
Bhandarwada Water Works	10,00,000 0 0	10,00,000 0 0	10,00,000 0 0
Add—Amount transferred from 17 Lakhs Loan	31,209 0 0	31,209 0 0	31,209 0 0
	10,31,209 0 0	10,31,209 0 0	10,31,209 0 0
Total ... Rs.	27,00,000 0 0	27,00,000 0 0	26,94,000 0 0
Less—Savings on the Bhandarwada Water Works Loan transferred to meet the cost of other works as sanctioned in the Corporation's Resolution No. 11358, dated 14th January 1892.....			14,378 2 9
		Rupees ...	26,79,621 13 3

* Excess sanctioned to be met out of savings in the other items, *vide* Municipal Commissioner's as per the then Town Council's Proceedings, dated the 27th idem.

the 27 Lakhs Loan.

Date of Repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Amount of 10 per cent. transferred to Loan Works Establishment Fund.	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	.....	4,92,691 8 2	4,92,691 8 2	.....	.....	.....
	.....	2,77,267 13 4	2,77,267 13 4	.....	32,476 12 3	32,476 12 3
	.....	2,55,766 10 0	2,55,766 10 0	.....	.....	.....
	..... *	98,289 9 6	98,289 9 6	.....	.....	.....
		95,742 3 9	95,742 3 9	.....	.....	.....
	1,45,000 0 0	.....	1,45,000 0 0	.....	.....	.....
	.....	1,48,482 5 10	1,48,482 5 10	.....	1,343 6 9	1,343 6 9
	1,45,000 0 0	13,68,240 2 7	15,13,240 2 7	.....	33,820 3 0	33,820 3 0
	.....	76,471 4 6	76,471 4 6	.....	.....	.....
	.....	39,259 5 11	39,259 5 11	.....	.....	.....
1st January 1919.	1,45,000 0 0	14,83,970 13 0	16,28,970 13 0	.....	33,820 3 0	33,820 3 0
	.....	.....	.....	.....	.....	.....
	1,45,000 0 0	14,83,970 13 0	16,28,970 13 0	.....	33,820 3 0	33,820 3 0
	29,035 7 6	9,87,794 5 9	10,16,830 13 3	.....	.....	.....
	.....	.....	.....	.....	.....	.....
	29,035 7 6	9,87,794 5 9	10,16,830 13 3	.....	.....	.....
	1,74,035 7 6	24,71,765 2 9	26,45,801 10 3	.....	33,820 3 0	33,820 3 0

No. 12333, dated 20th February 1884, regarding the disposal of the 17 Lakhs Drainage Loan adopted

B.

Works sanctioned out of the

Nature of Loan Works.	Estimated Cost of each Work.	Amount of Loan sanctioned.	Amount actually raised.
SURFACE DRAINAGE WORKS.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Widening Love Grove Sluices	1,61,362 15 4		
Culvert, &c., under B. B. & C. I. Railway near Bellasis Road ..	1,791 0 8		
Khetwadi survey	6,848 0 0		
Raising level of Khetwadi roads	27,017 0 0	A.	
Raising private compounds in Khetwadi	38,580 0 0		
Three branch drains in Khetwadi and storm-water entrances.	27,544 8 0	B.	
Intercepting drain, Tardeo District, and storm-water entrances	2,80,753 0 0		
Enlarging old open main drain	1,06,091 0 0		
Intercepting drain from Pydhoni to Bellasis Road and storm-water entrances	3,39,516 8 0	C.	
Making connection between low-level sewer and new main sewer	3,100 0 0		
Laying a new 24" main and removing old 24" Tulsi main and filling up the Haines Road entrance	32,688 0 0		
Constructing storage reservoir on the Flats and raising level of manholes in sewers	1,98,840 0 0		
Establishment	1,34,163 0 0		
Contingencies	53,705 0 0		
	14,12,000 0 0		
Extra petty works executed out of savings in S. E. Osman's Contract	.....		
Deduct—Amount transferred to Queen's Road intercepting Sewer as per Town Council's Resolution No. 2368, dated 17th Nov. 1882. Rs. a. p. 24,317 0 0			
Amount transferred to ovoid sewer from Crawford Market to Mint (*vide* Standing Committee's Reso. No. 5264, dated 14th Nov. 1888) 5,890 11 4			
Do. do. do. ... 1,961 13 9	32,169 9 1		
	13,79,830 6 11		
Deduct—Amount paid from 6 Lakhs Loan	6,00,000 0 0		
DRAINAGE WORKS EXECUTED OUT OF THE 15 LAKHS LOAN ONE OF THE 3 SANITARY WORKS LOANS AGGREGATING Rs. 44 LAKHS. Rs. a. p.	7,79,830 6 11		
Queen's Road intercepting sewer, including compensation for land 1,92,000 0 0			
Transfer from Surface Drainage Works as per Town Council's Resolution No. 2368, dated 17th Nov. 1882 ... ... 24,317 0 0			
2,16,317 0 0			
Less—Contribution received from Rs. a. p. Government ... ...50,000 0 0 Cost of Establishment ...12,348 0 0 62,348 0 0			
House Connections without Privy fittings 5,71,165 0 0	1,53,969 0 0		
Add—Transferred from Argyll Road, ovoid sewer, *vide* Standing Committee's Resolution No. 5192, dated 20th June 1888 19,046 14 4 5,90,211 14 4			
Less—Amount transferred to meet excess on pumping engines, Town Council's Reso. No. 52 of 13th January 1882 ... . 11,600 0 0			
	5,78,611 14 4		
15 Lakhs Loan carried over ...Rs.	7,32,580 14 4		
Surface Drainage Works carried over ...Rs.	7,79,830 6 11		

A. The contract for these works was let together to Messrs. Cowasji Sorabji Bhedwar & Co., and there is no excess on the totals.

B. Do. do. do. Syed Ebrahim Ossman & Co. do.

C. Do. do. do. Nagoo Sayaji & Co. do.

44 *Lakhs Sanitary Works Loan.*

Date of Repayment of the Loan.	Expenditure up to 31st March 1892.				Estimated Expenditure for 1892-93.			
	Amount of 10 per cent. transferred to Loan Works Establishment Fund.	Works.	Total.		Establishment.	Works.	Total.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	
	.....	1,57,326 7 7	1,57,326 7 7		.....	.....	.....	
	.....	1,791 0 8	1,791 0 8		.....	.....	.....	
	.....	5,599 10 0	5,599 10 0		.....	.....	.....	
	.....	28,355 0 1	28,355 0 1	A.		.....	.....	
	.....	25,336 2 1	25,336 2 1			.....	.....	
	.....	31,711 15 6	31,711 15 6	B.		.....	.....	
	.....	1,69,851 10 4	1,69,851 10 4			.....	.....	
	.....	71,318 13 5	71,318 13 5			.....	.....	
	.....	3,03,229 3 9	3,03,229 3 9			.....	.....	
	.....	2,610 8 10	2,610 8 10			.....	.....	
	.....	74,226 14 0	74,226 14 0	C.		.....	.....	
	.....	1,86,225 12 6	1,86,225 12 6			.....	.....	
	1,21,413 0 0	.....	1,21,413 0 0		.....	.....	.....	
	.....	44,654 8 2	44,654 8 2		.....	.....	.....	
	.....	92,248 4 5	92,248 4 5		.....	.....	.....	
	1,21,413 0 0	11,94,485 15 4	13,15,898 15 4		.....	.....	.....	
	.....	6,00,000 0 0	6,00,000 0 0		.....	.....	.....	
	1,21,413 0 0	5,94,485 15 4	7,15,898 15 4		.....	.....	.....	
	.....	1,53,969 0 0	1,53,969 0 0		.....	.....	.....	
	.....	95,867 1 9	95,867 1 9		.....	*3,47,731 1 11	*3,47,731 1 11	
	.....	2,49,836 1 9	2,49,836 1 9		.....	3,47,731 1 11	3,47,731 1 11	
	1,21,413 0 0	5,94,485 15 4	7,15,898 15 4		.....	.....	.....	

* Exclusive of Establishment charges to be paid out of the Loan Works Establishment Fund.

B—

Works sanctioned out of the

Nature of Loan Works.				Estimated Cost of each Work.	Amount of Loan sanctioned.	Amount actually raised
				Rs. a. p.	Rs. a. p.	Rs. a. p
Surface Drainage Work brought forward ...			Rs.	7,79,850 6 11		
15 Lakhs Loan brought forward ...			Rs.	7,32,580 14 4		
Automatic flushers at heads of gullies				5,570 0 0		
	Rs.	a.	p.			
Two more Pumping Engines	88,000	0	0			
Additional grant sanctioned under Town Council's Resolution No. 52, dated 13th January 1882 ...	9,600	0	0			
Extra machinery for engines	2,000	0	0			
				99,600 0 0		
House connections, Kamathipura				60,161 0 0		
Provision for shaft ventilators throughout				45,652 0 0		
Establishment...				89,239 0 0		
House connections survey				4,621 0 0		
Survey of pipe sewers				5,113 0 0		
Closing storm-water openings in Frere Road Sewer	Rs. 22,827					
Add—Amount transferred from Argyll Road Drain (*see* Standing Committee's Resolution No. 4657, dated 30th October 1889)	„ 2,369					
				25,196 0 0		
DRAINAGE WORKS EXECUTED OUT OF LOAN ONE OF THE 3 SANITARY WORKS LOANS AGGREGATING Rs. 44 LAKHS.				Rs. 20,88,000	10,67,732 14 4	
Pipe sewer from Clare Road along south portions of Haines Road and DeLisle Road ...	Rs. 1,05,955	a. 0	p. 0			
Add—Transferred from ovoid sewer, Argyll Rd.	3,783	15	1			
Do. Fort Drainage, Corporation's Resolution No. 1250, dated 5th June 1890 ...	4,521	1	6			
				1,14,260 0 7		
Pipe sewer from Parel Workshops to Clerke Road Ovoid Sewer..				65,891 0 0		
Extension of Clerke Road ovoid sewer to Parel Road				35,588 0 0		
Ovoid sewer across the Old Race Course ...	63,320	0	0			
Less—Transferred to construction of a double storied chawl for Water Works men at Chinchpokli	850	3	8			
				62,469 12 4		
Ovoid sewer from the Crawford Market down Hornby Road and Bazar Gate, thence to the Mint	85,287	0	0			
Add—Amount transferred from Surface Drainage Works under Standing Committee's Resolution No. 5264, dated 14th November 1888 ...	5,890	11	4			
Do. do. do. ...	1,961	13	9			
				93,139 9 1		
Ovoid sewer, Argyll Road	25,200	0	0			
Less—Amount transferred to Khetwadi house-connections	Rs. a. p. 19,046 14 4					
Amount transferred to 15 Lakhs Loan (closing storm-water entrance to Frere Road)—Standing Committee's Resolution No. 4657, dated 30th Oct. 1889.	2,369 0 0					
Amount transferred to pipe sewer from Clare Road along south portion of Haines Road.	3,783 15 1					
				25,199 13 5		
				0 2 7		
Establishment				86,809 0 0		
				4,07,657 8 7		
Carried over...			Rs.	23,55,220 13 10		

continued.

44 *Lakhs Sanitary Works Loan.*

Date of Repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Amount of 10 per cent. transferred to Loan Works Establishment Fund.	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	1,21,413 0 0	5,94,485 15 4	7,15,898 15 4	.....	.....	.....
	.....	2,49,836 1 9	2,49,836 1 9	.....	3,47,731 1 11	3,47,731 1 11
	.....	.....	.....	.....	5,570 0 0	5,570 0 0
	.....	98,438 1 9	98,438 1 9	.....	.....	.....
	.....	34,977 7 5	34,977 7 5	.....	.....	.....
	.....	44,947 0 6	44,947 0 6	.....	.....	.....
	88,869 0 0	.....	88,869 0 0	.....	.....	.....
	4,561 13 3	.....	4,561 13 3	.....	.....	.....
	.....	.....	.....	.....	.....	.....
	.....	17,108 9 6	17,108 9 6	.....	.....	.....
	93,430 13 3	4,45,307 4 11	5,38,738 2 2	.....	3,53,301 1 11	3,53,301 1 11
	.....	1,14,260 0 7	1,14,260 0 7	.....	.....	.....
	.....	65,793 9 11	65,793 9 11	.....	.....	.....
	.....	35,569 8 0	35,569 8 0	.....	.....	.....
	.....	59,746 13 2	59,746 13 2	.....	.....	.....
	.....	89,401 11 9	89,401 11 9	.....	.....	.....
	.....	.....	.....	.....	.....	.....
	36,309 0 0	.....	36,309 0 0	.....	.....	.....
	36,309 0 0	3,64,771 11 5	4,01,080 11 5	.....	.....	.....
	2,51,152 13 3	14,04,564 15 8	16,55,717 12 11	.....	3,53,301 1 11	3,53,301 1 11

B—

Works sanctioned out of the

Nature of Loan Works.	Estimated Cost of each Work.	Amount of Loan sanctioned.	Amount actually raised.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...Rs.	22,55,220 13 10		
WATER WORKS.			
1. Malabar Hill Reservoir	4,00,000 0 0		
2. Tulsi gathering ground, purchase of	96,336 0 0		,,
3. Improving water supply of the outlying districts Rs. 7,14,000—Rs. 1,083-2-8 transferred to Vehar filter beds	7,12,916 13 4		
Rs. a. p.			
4. Construction of filter beds at Vehar ... 1,01,000 0 0			
Add—Transferred ... 12,216 15 11*			
	1,13,216 15 11		
5. Raising the Tulsi Dams (including pitching of dams) Rs. 1,88,000—Rs. 7,793-10-4 transferred to Vehar filters	1,30,206 5 8		
6. Providing additional catch-water channels at Vehar and Tulsi Rs. 1,15,716—Rs. 10,285-1-3 transferred to meet excess on Bhandarwada Loan	1,05,430 14 9		
7. Check meters for prevention of waste of water Rs. 1,50,000 —Rs. 2,911-1-6 transferred to Vehar filters and Rs. 13,399-10-6 transferred to meet excess on Bhandarwada Loan	1,33,689 4 0		
8. New hydrants	22,900 0 0		
Rs. a. p.			
9, Construction of a double-storied chawl for the Water Works staff and quarters for the Superintendent... ... ... 30,577 0 0			
Add—Transferred from Rs. a. p.			
Ripon Road ovoid Sewer grant ... 850 3 8			
Do. Ripon Road grant ... 425 0 0			
1,275 3 8			
	31,852 3 8		
10. Provision of a turbine at the Malabar Hill Reservoir ...	2,500 0 0		
11. Enlargement of different mains, &c.	1,12,892 0 0		
12. New water main from the Junction of Nesbit Road ...	15,000 0 0		
Excess on Bhandarwada Water Works Loan—			
Transferred from catch-water channels Rs. a. p.			
at Vehar and Tulsi... 10,285 1 3			
Do. *do.* Check meters for prevention of waste water 13,399 10 6			
	23,684 11 9		
	19,00,625 5 1		
ROADS.			
New road from Bellasis Road across Old Race Course 1,43,292 0 0			
Deduct—Amount transferred to Water Works chawl 425 0 0			
	1,42,867 0 0		
Carried over ...	42,98,718 2 11		

	Rs. a. p.
* Transferred from improving the water supply of the outlying districts ...	1,083 2 8
Do. Raising the Tulsi Dam ...	7,793 10 4
Do. Check meters	2,911 1 6
Do. Bori Bandar Stables	429 1 5
	12,216 15 11

continued.

44 *Lakhs Sanitary Works Loan.*

Date of Repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Amount of 10 per cent. transferred to Loan Works Establishment Fund.	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	2,51,152 13 3	14,04,564 15 8	16,55,717 12 11	.....	3,53,301 1 11	3,53,301 1 11
	41,566 0 0	3,58,434 0 0	4,00,000 0 0	.....	.....	.....
	.....	94,500 0 0	94,500 0 0	.....	.....	.....
	30,365 0 0	6,82,065 0 8	7,12,430 0 8	.....	.....	.....
	8,783 0 0	1,04,433 15 11	1,13,216 15 11	.....	.....	.....
	10,434 0 0	1,17,520 15 5	1,27,954 15 5	.....	.....	.....
	10,062 0 0	95,368 14 9	1,05,430 14 9	.....	.....	.....
	6,522 0 0	1,27,132 14 8	1,33,654 14 8	.....	.....	.....
	1,991 0 0	20,876 7 1	22,867 7 1	.....	.....	.....
	2,659 0 0	29,182 3 3	31,841 3 3	.....	.....	.....
	218 0 0	2,282 0 0	2,500 0 0	.....	.....	.....
	9,736 0 0	1,03,130 8 6	1,12,866 8 6	.....	.....	.....
	.....	15,000 0 0	15,000 0 0	.....	.....	.....
	.....	23,684 11 9	23,684 11 9	.....	.....	.....
	1,22,336 0 0	17,73,611 12 0	18,95,947 12 0	.....	.....	.....
	12,461 0 0	1,29,039 1 2	1,41,500 1 2	.....	.....	.....
	3,85,949 13 3	38,07,215 12 10	36,93,165 10 1	.....	3,53,301 1 11	3,53,301 1 11

B—

Works sanctioned out of the

Nature of Loan Works.	Estimated Cost of each Work.	Amount of Loan sanctioned.	Amount actually raised.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...	42,98,713 2 11		
OTHER SANITARY WORKS.			
Enlargement of Dhobi Lines at Mahaluxmi	50,000 0 0		
Chawl for Gowlis working at the Agripada Milch Cattle Stables	6,237 0 0		
Rs. a. p.			
Health Department stables at Bori Bandar 50,000 0 0			
Less—Transferred to construction of filter beds at Vehar 429 1 5			
	49,570 14 7		
	1,05,807 14 7		
Grand Total 44 Lakhs Sanitary Works Loan... ...	44,04,521 1 6	44,04,521 1 6	44,04,521 1 6
Deduct—Savings on the following works transferred to meet the cost of other works as sanctioned in the Municipal Corporation Resolution Nos. 11358, dated 14th January 1892, and 13318, dated 25th February 1892—			
Tulsi gathering ground	1,836 0 0		
Improving water supply of the outlying districts ...	486 12 8		
Raising Tulsi Dams	2,251 6 3		
Check meters	34 5 4		
New hydrants	32 8 11		
Water Works chawl and quarters for the Superintendent	11 0 5		
Enlargement of mains, &c.	25 7 6		
		4,677 9 1	
Rs. a. p.			
Surface Drainage Works 61,826 3 1			
Kamathipura privy connections ... 25,183 8 7			
Pumping engines and machinery ... 1,161 14 3			
Establishment for Drainage Works executed out of the 15 lakhs Loan... 370 0 0			
House connections survey 59 2 9			
Pipe sewer, Parel Workshops 97 6 1			
Extension of Clerke Road sewer ... 18 8 0			
Ovoid sewer across old Race Course... 2,722 15 2			
Do. Crawford Market ... 3,737 13 4			
Do. Argyle Road 0 2 7			
	95,177 9 10		
Enlargement of the Dhobi Lines ... 17,152 8 9			
Bori Bunder Stables 1,545 1 4			
	18,697 5 1		
		1,13,874 14 11	1,18,552 8 0
		Rupees ...	42,85,968 9 6

concluded.

44 *Lakhs Sanitary Works Loan.*

Date of Repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Amount of 10 per cent. transferred to Loan Works Establishment Fund.	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	3,85,949 13 3	33,07,215 12 10	36,93,165 10 1	.....	3,53,301 1 11	3,53,301 1 11
	4,348 0 0	28,499 12 3	32,847 12 3	.....	.....	.....
	107 2 6	6,129 13 6	6,237 0 0	.....	.....	.....
	4,348 0 0	43,677 13 3	48,025 13 3	.....	.....	.....
1st July 1925	8,803 2 6	78,307 7 0	87,110 9 6	.....	.....	.....
	3,94,752 15 9	33,85,523 3 10	37,80,276 3 7	.....	3,53,301 1 11	3,53,391 1 11

C

7 Lakhs Sanitary

Nature of Loan Works.	Rs. a. p.	Estimated cost of each Work. Rs. a. p.	Amount of Loan sanctioned. Rs. a. p.	Amount actually raised. Rs. a. p.
1. Drainage of the Fort	4,53,329 0 0			
Less—Transferred to Pipe Sewer from Clare Road along south portions of Haines Road (Corporation's Resolution No. 1250 of 5th June 1890)	4,521 1 6			
		4,48,807 14 6		
2. Additional works at Love Grove Pumping Station ...		39,724 0 0		
3. Constructing pipe drains in certain roads in Khetwadi ...		6,290 0 0		
4. Do. side drain in Wari Bandar Road		9,046 0 0		
5. Extra grant on account of Queen's Road intercepting sewer		13,544 0 0		
6. Malabar Hill Reservoir roofing, extra grant...		1,58,750 0 0		
7. Increasing and improving the distribution of water supply and providing higher levels, Tulsi District, with filtered water		21,050 0 0		
8. Extra grant for the adjustment of expenditure on Bhandarwada Reservoir Works, new Outlet Tower at Vehar, less savings on 17 lakhs Loan Works and various Water Works included in the Sanitary Works Loan of 44 lakhs..		10,589 0 0		
		7,07,800 14 6		
Or say, Rupees... ...		*6,95,478 14 6	*6,95,478 14 6	*6,95,478 14 6
Deduct—Savings on the following works transferred to meet the cost of other works as per Municipal Corporation's Resolution No. 11358, dated 14th January 1892, and 13318, dated 25th February 1892—Malabar Hill Reservoir Roofing.		44,710 13 6		
Increasing and improving the distribution of Water Supply, Tulsi District		838 7 8		
Extra grant for the adjustment of excess on Bhandarwada Works, &c.		2,598 5 6		
			48,147 10 8	
Net Savings on Drainage Works		... ...	1,786 5 9	
				49,934 0 5
				6,45,544 14 1

* Excluding Rs. 4,521-1-6 transferred as per Corporation's Resolution No. 1950,

D.—*Tansa Loan, of Rupees*

Nature of Loan Works.	Estimated Cost of each Work. Rs. a. p.	Amount of Loan sanctioned. Rs. a. p.	Amount actually raised. Rs. a. p.
Tansa Works	1,47,00,000 0 0	1,47,00,000 0 0	1,47,00,000 0 0
Add—Excess sanctioned in Corporation's Resolution No. 8893, dated 12th November 1891, to be met from the premia received on the Loan		1,50,900 0 0	
Cost of carrying out the ceremonial in connection with the opening of the Tansa Works, sanctioned as per Corporation's Resolution No. 13314, dated 25th February 1892		20,000 0 0	
Bonus sanctioned as per Corporation's Resolution No. 1022, dated 5th May 1892		16,000 0 0	
Rs. ...		1,48,86,000 0 0	

Works Loan.

Date of repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Amount of 10 per cent. transferred to Loan Works Establishment Fund	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	39,419 0 0	3,58,853 13 9	3,98,272 13 9	.....	50,535 0 9	50,535 0 9
	.....	34,645 9 6	34,645 9 6	.....	.....	.....
	.....	5,282 6 0	5,282 6 0	.....	.....	.....
	.....	4,934 0 1	4,934 0 1	.....	.....	.....
	.....	9,633 10 8	9,633 10 8	.....	.....	.....
	.....	1,14,039 2 6	1,14,039 2 6	.....	.....	.....
	.....	20,211 8 4	20,211 8 4	.....	.....	.....
	.....	7,990 10 6	7,990 10 6	.....	.....	.....
1st Feb. 1928.	39,419 0 0	5,55,590 13 4	5,95,009 13 4	.....	50,535 0 9	50,535 0 9

dated 5th June 1890, to meet excess in the grant for Agripada Pipe Sewer Work.

1 *Crore and* 47 *Lakhs.*

Dates of repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Establishment.	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Between 1st January 1928 and 1st January 1953.	4,66,819 9 4	1,41,69,741 7 7	1,46,36,561 0 11	81,180 6 8	1,68,258 8 5	2,49,438 15 1

Loan of 12 *Lakhs for Drainage*

Nature of Loan Works.	Estimated Cost of each Work.	Amount of Loan sanctioned.	Amount actually raised.
	Rs. a. p.	Rs. a p.	Rs. a. p.
1. Queen's Road House Sullage water connections	11,14,929 0 0		
2. Water mains in Frere Road	85,000 0 0		
	11,99,929 0 0		
Or say, Rupees... ...	12,00,000 0 0	12,00,000 0 0	12,00,000 0 0
Deduct—Savings transferred as under to meet cost of other works as sanctioned in Municipal Corporation's Resolution Nos. 11358, dated 14th January 1892, and 13318, dated 25th February 1892—			
Unappropriated balance of the amount of Rs. 11,15,000 sanctioned for the Queen's Road House Sullage water connections		71 0 0	
Water mains in Frere Road		4,968 11 0	
			5,039, 11 0
			11,94,960 5 0

F.

Loan of Rupees 10,08,500 *of* 1888-89

Nature of Loan Works.	Estimated cost of each Work.	Amount of Loan sanctioned.	Amount actually raised.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. New Market at Colaba	50,300 0 0		
2. Erskine Road Market Extension	4,04,122 0 0		
3. Arthur Crawford Market Extension	49,942 0 0		
* Exclusive of Rs. 31,908-11-11 sanctioned to be paid out of the premia received on the loan as per Corporation's Resolution No. 2758, dated 11th June 1891	5,04,364 0 0 or say 5,00,000 0 0	5,00,000 0 0	
1. Extension of Parel Storm-water Drain to Shepherd Road...	33,742 0 0		
2. Storm-water Drain from Bellasis Road to ⅔ the length of Ripon Road	23,436 0 0		
3. 9" Pipe Sewer along Bellasis Road, Foras Road, and Gilder Street	29,822 0 0		
4. Concrete Trench Waste Weir, Vehar	35,000 0 0		
5. Mains in 14 Streets, west of Frere Road	17,325 0 0		
6. Do. in various Streets	51,475 0 0		
7. Arthur Road Connection Works	13,200 0 0		
8. Deacon's meters	18,000 0 0		
9. Cross Road at Mahaluxmi Station	23,000 0 0		
10. Road through Navroji Hill	2,63,875 0 0		
	5,08,875 0 0	5,08,875 0 0	
Total ...Rs.	10,08,875 0 0	10,08,875 0 0	10,08,500 0 0
Less—Savings on the following works transferred to meet the cost of other works as per Corporation's Resolution Nos. 11358, dated 14th January 1892, 13318, dated 25th February 1892, and 188, dated 6th April 1892—			
Extension of Parel Road Storm-water drain to Shepherd Road Storm-water drain from Bellasis Road to ⅔ the length of Ripon Road		14,129 3 8	
9" Pipe Sewer along Bellasis Road, Foras Road and Gilder Street		8,191 7 8	
		22,320 11 4	
Concrete Trench WasteWeir, Vehar Lake...	4,391 8 11		
Mains in 14 Streets west of Frere Road and in various Streets	9,524 14 4		
Deacon's meters...	1,212 0 0		
Arthur Road Connection Works	3,657 5 7	18,785 12 10	41,106 8 2
			9,67,393 7 10

and Water Works.

Date of repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Establishment.	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	46,022 14 5	8,29,694 0 4	8,75,716 14 9	.....	2,39,212 1 3	2,39,212 1 3
	918 8 9	79,112 12 3	80,031 5 0	.....	.....	.....
1st Jan. 1928	46,941 7 2	9,08,806 12 7	9,55,748 3 9	.....	2,39,212 1 3	2,39,212 1 3

for Drainage and Water Works, Markets and Roads.

Date of repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Establishment.	Work.	Total.	Establishment.	Work.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	.....	.....	.....	3,240 0 0	47,060 0 0	50,300 0 0
	.....	*3,99,758 0 0	*3,99,758 0 0	...	.....	.....
	.....	231 12 0	231 12 0	3,000 0 0	46,710 4 0	49,710 4 0
	.....	3,99,989 12 0	3,99,989 12 0	6,240 0 0	93,770 4 0	1,00,010 4 0
	1,839 15 7	39,266 7 2	41,106 6 9	.....	.....	.....
	1,587 12 11	15,702 11 2	17,290 8 1	....	.....	.....
	1,324 6 2	29,284 0 11	30,608 7 1	.....	.....	.....
	1,321 1 7	57,954 0 1	59,275 1 8	.....	.....	.....
	.....	9,542 10 5	9,542 10 5	.....	.....	.....
	.....	16,788 0 0	16,788 0 0	.....	.....	.....
	.....	19,594 4 8	19,594 4 8	.....	.....	.....
	.....	75 0 0	75 0 0	7,680 0 0	2,56,120 0 0	2,63,800 0 0
	6,073 4 3	1,88,207 2 5	1,94,280 6 8	7,680 0 0	2,56,120 0 0	2,63,800 0 0
1st Oct. 1928	6,073 4 3	5,88,196 14 5	5,94,270 2 8	13,920 0 0	3,49,890 4 0	3,63,810 4 0

G.

Loan of Rs. 2,48,000 *of* 1888-89

Nature of Loan Works.	Estimated Cost of each Work.	Amount of Loan sanctioned.	Amount actually raised.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Agripada House Sullage Water Connections	2,48,642 0 0	2,48,000 0 0	2,48,000 0 0

H.

35 Lakhs various

Nature of Loan Works.	Estimated Cost of each Work.	Amount of Loan sanctioned.	Amount actually raised.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Pawai Water Works	7,00,000 0 0		
2. Additional Water Mains	1,00,000 0 0		
3. Improvement Works at the Malabar Hill Reservoir ...	1,00,000 0 0		
4. Extension of Catch-water Channels at Tulsi...	20,836 9 1		
5. Roads and Streets in Agripada and elsewhere	15,00,000 0 0		
6. Difference between the amount provided in the Loan of Rs. 10,08,500 for road through Navroji Hill Road from Elphinstone Bridge to Dongri Street, and the revised amount sanctioned for the road in Municipal Corporation's Resolution No. 5293, dated 19th November 1888...	68,148 0 0		
7. Sewer flushing arrangements	14,000 0 0		
8. Purchase of land on the Flats for the disposal of town sweepings	2,00,000 0 0		
9. Health Department bullock stables and quarters for scavengers	1,50,000 0 0		
10. Chawl for Halalkhors in Cursetji Sooklaji Street	97,847 0 0		
11. Labourers' quarters in connection with the Arthur Crawford Markets	22,700 0 0		
12. Purchase of land at Arthur Road	23,676 0 0		
13. Bhuleshwar Market extension	4,50,000 0 0		
14. New Market at Foras Road	50,000 0 0		
	34,97,207 9 1 or say 35,00,000 0 0	35,00,000 0 0	35,00,000 0 0

I.

Loan of Rs. 8 *Lakhs for New*

Nature of Loan Works.	Estimated cost to be met from Loan.	Amount of Loan sanctioned.	Amount raised
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Municipal Office Building	8,00,000 0 0	8,00,000 0 0	8,00,000 0 0

for Agripada House Sullage Water Connections.

Date of repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Establishment.	Work.	Total.	Establishment.	Work.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1st July 1929	12,514 8 5	1,20,252 9 7	1,32,767 2 0	6,000 0 0	1,09,232 14 0	1,15,232 14 0

Sanitary Works Loan.

Date of repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Establishment.	Work.	Total.	Establishment.	Work.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	15,952 3 7	4,49,195 15 5	4,65,148 3 0	.....	2,34,851 13 0	2,34,851 13 0
	584 5 8	87,355 11 2	87,940 0 10	.....	12,059 15 2	12,059 15 2
	1,916 3 10	92,149 7 4	94,065 11 2	.....	5,934 4 10	5,934 4 10
	455 3 2	20,381 5 11	20,836 9 1	.....	.....	.....
	4,081 6 4	6,47,613 11 0	6,51,695 1 4	6,491 9 10	8,41,813 4 10	8,48,304 14 8
	.....	.....	.....	.....	68,148 0 0	68,148 0 0
	.....	1,432 8 0	1,432 8 0	.....	12,567 8 0	12,567 8 0
	.....	1,98,913 8 8	1,98,913 8 8	.....	.....	.....
	.....	.....	.....	6,000 0 0	1,44,000 0 0	1,50,000 0 0
	1,087 13 0	23,077 11 3	24,165 8 3	3,171 3 0	70,510 4 9	73,681 7 9
	.....	.....	.....	.....	22,700 0 0	22,700 0 0
	.....	.....	.....	.....	23,676 0 0	23,676 0 0
	.....	2,68,704 13 2	2,68,704 13 2	2,280 0 0	1,79,015 2 10	1,81,295 2 10
	.....	.....	.....	1,978 0 0	48,022 0 0	50,000 0 0
1st July 1930	24,077 3 7	17,88,824 11 11	18,12,901 15 6	19,920 12 10	16,63,298 5 5	16,83,219 2 3

Municipal Office Building.

Date of repayment of the Loan.	Expenditure up to 31st March 1892.			Estimated Expenditure for 1892-93.		
	Establishment.	Works.	Total.	Establishment.	Works.	Total.
	The Establishment charges were met from the Invested Fund of former years.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1st July 1931		1,11,982 5 10	1,11,982 5 10	9,276 0 0	6,50,836 10 9	6,60,112 10 9

J.

Works sanctioned out of savings on former Loan Works already completed.

Nature of Loan Works.	Estimated cost to be met from Loan.	Expenditure up to 31st March 1892.			Estimated expenditure for 1892-93.		
		Establishment.	Works.	Total.	Establishment.	Works.	Total.
WATER WORKS.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Construction of the residence of the Chief Inspector of Water Works	46,360 0 0	.....	.....	.....	.....	46,360 0 0	46,360 0 0
Covering the storage basin of the Bhandarwada Reservoir and the construction of filters over it	44,597 14 4	.....	.....	.....	.....	44,597 14 4	44,597 14 4
DRAINAGE.							
Main Sewerage, Parell	77,603 0 0	.....	99 11 0	99 11 0	7,760 0 0	69,743 5 0	77,503 5 0
Branch Pipe Sewers at Parell	20,852 0 0	.....	.....	.....	.....	20,852 0 0	20,852 0 0
Arching over main drain at Arthur Road ...	18,000 0 0	.....	.....	.....	.....	18,000 0 0	18,000 0 0
Completing the storm-water drain, Hornby Road	21,598 0 0	.....	.....	.....	.....	21,598 0 0	21,598 0 0
Total...Rs.	2,29,010 14 4	.....	99 11 0	99 11 0	7,760 0 0	2,21,151 3 4	2,28,911 3 4

K.

Advances for Works for which Loans are either not sanctioned or raised.

	Expenditure up to 1891-92.			Estimated Expenditure for 1892-93.		
	Establishment.	Works.	Total.	Establishment.	Works.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Improvement and Extension of the Victoria Gardens	.....	2,44,707 6 1	2,44,707 6 1	.....	.....	.....
Ward Office at Dadur...	.....	*14,140 0 0	*14,140 0 0	.....	.....	.....
Survey for Pipe Sewers in Umarkhadi and other districts ...	11,621 6 1	.....	11,621 6 1	.....	.....	.....
Pumps and steam-engines required for the working of the Love Grove Pumping Station	.....	86,999 15 8	86,999 15 8	18,540 0 0	2,94,460 0 4	3,13,000 0 4
Construction of Fire Brigade quarters and stations	†1,756 9 10	.....	1,756 9 10	10,147 6 2	2,38,096 0 0	2,48,243 6 2
Laying 27″ and 24″ mains from the Malabar Hill Reservoir to the Frere Fountain, Fort	975 0 0	43,546 12 8	44,521 12 8	.....	18,838 3 4	18,838 3 4
Filling in rocky and unserviceable parts of the Roman Catholic Cemetery at Sewri	363 13 5	9,514 0 0	9,877 13 5	.....	.....	.....
Temporary Chawl of 150 rooms for Halalkhors at Khursbedji Suklaji Street	.....	1,782 1 4	1,782 1 4	.....	.....	.....
Total ...Rs.	14,716 13 4	4,00,690 3 9	4,15,407 1 1	28,687 6 2	5,51,894 3 8	5,80,081 9 10

* Pending the receipt of the Corporation's final decision in the matter, this amount has been debited to the Miscellaneous Works Loan of 10,08,500, in which it was originally included, but was not sanctioned by the Government of India.

† For preparing plans and estimates.

SUMMARY.

		Amount of Loan sanctioned and raised plus additional grants and minus transfers.	Expenditure up to 31st Mar. 1892.	Estimated Expenditure for 1892-93.	Total anticipated Expenditure up to 1892-93.	Probable Balance on 31st March 1893.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
27 Lakhs Drainage and Water Works Loan as per statement ...	A...	26,79,621 13 3	26,45,801 10 3	33,820 3 0	26,79,621 13 3	.....
44 Lakhs Sanitary Works Loan as per statement	B...	42,85,968 9 6	37,80,276 3 7	3,53,301 1 11	41,33,577 5 6	1,52,391 4 0
7 Do. do do. do.	C...	6,45,544 14 1	5,95,009 13 4	50,585 0 9	6,45,544 14 1	.....
Tansa Water Works Loan of Rs. 1 Crore and 47 Lakhs as per statement	D...	1,48,86,000 0 0	1,46,36,561 0 11	2,49,438 15 1	1,48,86,000 0 0	.....
12 Lakhs Drainage and Water Works Loan as per statement	E...	11,94,960 5 0	9,55,748 8 9	2,39,212 1 3	11,94,960 5 0	.....
Loan of 10,08,500 for Drainage and Water Works, Markets and Roads as per statement	F...	9,67,393 7 10	5,94,270 2 8	3,63,810 4 0	9,58,080 6 8	9,313 1 2
Agripada House Sullage Water Connections Loan of Rs. 2,48,000 as per statement	G...	2,48,000 0 0	1,32,767 2 0	1,15,232 14 0	2,48,000 0 0	.....
85 Lakhs Various Sanitary Works Loan as per statement	H...	35,00,000 0 0	18,12,901 15 6	16,83,219 2 3	34,96,121 1 9	3,878 14 3
Municipal Building Loan of Rs. 8 lakhs as per statement	I...	8,00,000 0 0	1,11,982 5 10	6,60,112 10 9	7,72,095 0 7	27,904 15 5
Works sanctioned out of savings on works completed out of the former Loans as per statement	J...	2,29,010 14 4	99 11 0	2,28,911 3 4	2,29,010 14 4	.....
Total ...	...Rs	2,94,36,500 0 0	2,52,65,418 4 10	39,77,593 8 4	2,92,43,011 13 2	1,93,488 2 10
Advanced for works for which loans are either not raised or sanctioned as per statement	K...	.....	4,15,407 1 1	5,80,081 9 10	9,95,488 10 11	.....
Grand Total	...Rs.	2,94,36,500 0 0	2,56,80,825 5 11	45,57,675 2 2	3,02,38,500 8 1	.....

No. 11357 of 23rd August 1892.
Forwarded to the Standing Committee for information.
H. A. ACWORTH, Commissioner.

No. 5751. *Resolved*: "That the following be printed on the minutes of this day's meeting and brought on for consideration a fortnight hence:—Memorandum No. 11357, dated 23rd instant, from the Commissioner, forwarding, with reference to the late Town Council's resolution No. 1444, dated 22nd December 1886, letter No. 1743, dated 20th instant, from the Chief Accountant, enclosing 11 statements, marked A to K, showing the estimated cost of each loan work and expenditure thereon, up to 31st March 1892."

In accordance with notice it was proposed by K. M. Shroff, Esq.—

"That, as was provided in No. I of the Rules for the conduct of business of the Town Council, in future no subject be brought before the Standing Committee as 'Extra' business in addition to the items included in the agenda paper of the day, unless that business be of a particularly urgent character, and may have cropped up since the issue of the agenda paper."

Withdrawn.

No. 5753. *Resolved*: "That the following be circulated to members for perusal:—Letter No. 11642, dated 27th instant, from the Commissioner, forwarding lists giving the size, length and value of iron-pipes available in the Municipal stores, and also lying spare on the pipe lines of the Vehar, Tulsi and Tansa Lakes, beginning with 3″ and ending with 48″."

No. 5754. *Resolved*: "That the following be printed and circulated and brought on for consideration a fortnight hence:—Letter No. 11619, dated 27th instant, from the Commissioner, reporting on the Accountant General's letter on the account system of the Municipality, and forwarding memorandum No. 1707, dated 17th idem, from the Chief Accountant."

Considered the Progress Reports, up to the end of June 1892, of new works now in course of construction.*

No. 5755. *Resolved*: "That the progress report of new works in course of construction, up to the end of June 1892, be *recorded*."

* *See* Appendix D.

Resolved: "That, with reference to letter, dated 19th July last, from Mr. Bechardas Moorlidhur, on the subject of the want of roads, lighting, police protection and provision of drainage in Agripada, the Corporation be recommended to inform applicant in the terms of the Committee's resolutions, Nos. 4776 and 4971, dated 10th and 17th instant, *viz.*, that there are considerable difficulties in the way of acquiring the land required for the construction of streets and drains in that neighbourhood, but that the Municipal Commissioner is doing his best to secure the ground in question, of which a considerable area has already been secured. That, as to sewerage drainage and lighting, they can only follow on the completion of the acquisition of the sites required for roads and streets."

No. 5756.

The following statement * was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 28th August 1892.

Read letter No. 12037, dated 31st August 1892, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honor to report, that a plot of land bearing Revenue Survey No. 3487 and situated in the Agripada district between Ripon and Haines Roads, is required for the construction of a new street with frontages. This plot of land admeasures about 10,561 square yards and is owned by Hawabai, wife of Futoobhai Pultran, Messrs. Shaik Mulung Oosman, Shaik Rajub Oosman and Shaik Chotoo Oosman. Out of these owners, Shaik Rajub Oosman has agreed to sell his portion of the land at a reasonable rate, but hitherto negotiations carried on with the rest of the owners have failed.

Under the circumstances the sanction of the Standing Committee is requested to acquiring, under the Land Acquisition Act, the portions of the plot of land bearing Revenue Survey No. 3487 and belonging to Hawabai, Messrs. Shaik Mulung Oosman and Shaik Chotoo Oosman.—I have, &c.,

H. A. ACWORTH, Commissioner.

Resolved: "That, as applied for by the Commissioner, in his letter No. 12037, dated this day, sanction be given to his applying to Government to acquire, under the Land Acquisition Act, 7,543 square yards, or thereabout, of ground, the property of Hawabai, wife of Futoobhai Pultran, Sheik Mulung and Sheik

No. 5757.

* *See* Appendix B.

Chotoo Oosman, situate between Ripon and Haines Roads, as shown on plan marked 'A,' dated this day, and filed in supplement to minute books, the said ground being required for the sites of roads and frontages for the Agripada district. The cost to be paid out of the loan of 15 lakhs for constructing roads in that district and elsewhere."

No. 5758. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 12045, dated this day, sanction be given to the payment of Rs. 74-12-0 as allowance to the staff employed at the by-election held on the 18th idem to fill the casual vacancy of a Councillor. The amount to be paid out of the budget grant for election expenses."

No. 5759. *Resolved* : "That the following be *recorded* :—Memorandum No. 11865, dated 30th instant, from the Commissioner, reporting, with reference to the resolution of the Committee No. 4484, dated 3rd October 1888, the transfer of Rs. 50,000 from the Surplus Cash Deposit Account to the Municipal General Fund pass book on 25th instant."*

No. 5760. *Resolved* : "That the following be *recorded* :—Memorandum No. 11864, dated 30th instant, from the Commissioner, reporting that there was no case of burst on the Tansa Line during the week ending 27th idem."

The Secretary reported the receipt of an anonymous letter, dated 18th instant, to the address of the "President, Standing Committee," complaining of nuisance in an oart at Girgam which was formerly used by the Government Remount Stables.

It was agreed that the letter in question be destroyed in accordance with the usual practice.

At the conclusion of this meeting the Standing Committee, accompanied by the Commissioner and the Secretary, proceeded to the New Municipal Office, now in course of

* The Chief Accountant, in his letter No. 1825 of the 29th instant, reported that the balance standing to the credit of the above account after effecting the transfer amounts to Rs. 23,86,899-6-2, *viz* :—

	Rs.	a.	p.
In Cash	9,124	1	2
In 5 per cent. Municipal Debentures of the nominal value of Rs. 17,66,500	17,66,500	0	0
In 4 per cent. Government Paper for Rs. 6,13,000	6,11,275	5	0
Total Rs.	23,86,899	6	2

construction, where they were received by the Architect, Mr. Frederick W. Stevens, C.I.E., F.R.I.B.A., M.I.C.E., Mr. Venkoo Balla, the Contractor for the building, Mr. E. H. Elsworthy, A.M.I.C.E., M.I.M.E., of the firm of Richardson & Cruddas, Contractors for the engine-house, steam-pumps, fire service, water-supply, drainage, &c., and Rao Saheb Sittaram Khunderao, Clerk of the Works.

After making a detailed inspection of the building, the Committee, on the motion of Mr. K. M. Shroff, passed a vote of thanks to Mr. Stevens for the careful and exhaustive manner in which he explained the plan and arrangements of the building and the details thereof.

BOMBAY, *7th Sept.* 1892.

AT the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 31st ultimo, were signed.

No. 6114. The seal of the Corporation was affixed to deed of contract with Messrs. Richardson & Cruddas for the supply of seven vans for the conveyance of meat.

The seal was also affixed to deeds of agreement (1) between Mr. Venkuji Nursuji and the Corporation, securing to the Municipality the right to acquire at any future time the set-back of property situated at No. 57 at the junction of Suklaji Street and Kamathipura 2nd and 3rd Streets, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 10 per square yard, for any land shewn on the plan and scored red to be there taken up after ten years, from the date of this indenture, inclusive of any loss, damage or expense sustained by him by reason of such acquisition; (2) ditto ditto with Mr. Anandrao Chintoba in respect of property situate at Nos. 78-80, Agiari Street, ditto ditto at the rate of Rs. 25 per square yard, for any land to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition; and (3) ditto ditto with Mr.

Shapurji Sheriarji Madon in respect of property situate at Suparibaug Road, providing that if, at any time hereafter he renders himself liable to set-back his premises coloured yellow on the plan, he shall not claim or be entitled to receive any compensation whatsoever on account of the unauthorised work indicated by the line B C on the plan or of any further work which may hereafter be added to the building, and in the event of any portion of the land scored red being required, Mr. Shapurji S. Madon shall accept the same rate for it as may be settled for the land coloured red recently acquired.

No. 6115. *Resolved* : " That, as applied for by the Commissioner, in his memoranda Nos. 12099 and 12353, dated 1st and 3rd instant, and Nos. 12450 to 12453, dated 5th idem, sanction be given under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.			Where.
Mr. Poshia Baba Thakur...	...	Building at	No. 2010, Gowari Village, Matunga Road.
,, Canoo Govind ...	...	Do.	at Gilder Street.
Bai Fatmabai ...	...	Do.	at Mount Road, Narelwadi.
Mr. Essoofkhan Fattekhan	...	Do.	at Ripon Road.
Sheik Vinoos Shaik Bawa Saheb.		Do.	at Jacob's Circle near the Junction of Arthur Road and Ripon Road.
Mr. Kuya Jaffer ...	...	Do.	at Balaram Road."

No. 6116. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 12656, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

Read the following :—

BOMBAY, *7th Sept.* 1892.

To THE CHAIRMAN OF THE STANDING COMMITTEE.

SIR,—In forwarding for the information of the Standing Committee a copy of the Preliminary Report of the Committee appointed to enquire into and report on the question of house-connections, I have the honor to request that the Standing Committee will recommend the Corporation to sanction a further grant of Rs. 5,000 to the debit of the grant for carrying out the work of the connections, to allow of the experimental trials alluded to in the said report being made.—I have, &c.,

JAVERILAL U. YAJNIK,
Chairman of the House-Connections Committee.

Proposed by Colonel Wilson, seconded by Javerilal U. Yajnik, Esq.—

"That, with reference to the Standing Committee's resolution No. 5749, dated 31st ultimo, and on the application of the House-Connections Committee, the Corporation be recommended to sanction a further grant of Rs. 5,000 to the debit of the grant for carrying out the work of the connections to allow of the experimental trials alluded to in the said resolution being made."

No. 6117.

Amendment, moved by A. G. Viegas, Esq.—

"That the Standing Committee desire to have before it plans and estimates of the various schemes referred in the Preliminary Report of the House-Connections Committee, to enable it to recommend the Corporation to sanction a further grant of Rs. 5,000 towards the experimental trials of these schemes.

"That the Municipal Commissioner be requested to ask the Acting Executive Engineer to furnish this Committee with plans and estimates of the various schemes, putting himself, if necessary, in communications with the experts."

Not seconded.

Amendment, moved by Kaikhosro N. Kabraji, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

"That the Standing Committee adhere to the terms of their Resolution No. 5749, recommending a grant of Rs. 5,000 only, for experiments in connection with house-connections, on the understanding that if it is shown hereafter that a further grant is necessary, the Committee will be prepared to make the requisite recommendation to the Corporation."

On a division, this ammendment was *lost*, the votes being 5 *for* and 6 *against.*

Amendment, proposed by Grattan Geary, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

"That the Corporation be recommended to sanction the further sum of Rs. 5,000 for such experiments as in the judgment of the Municipal Executive be deemed safe and expedient."

On a division, the amendment was *lost*, the votes being 4 *for* and 6 *against.*

The original motion was *carried* by 6 votes *against* 2.

Read letter No. 12511, dated 5th instant, from the Commissioner to the Secretary, as under:—

SIR,—I regret to have to report for the information of the Standing Committee and Corporation that the fall in the value of silver necessitates a revision of the amount provided for the Love Grove Pumping engines and boilers. The sum originally asked for and sanctioned on this account was Rs. 3,38,259 equal to £23,960 at 1*s.* 5*d.* The first instalment payment under the contract with the makers was remitted on 4th January 1892 at 1—4$\frac{19}{32}$, the second instalment on 18th May was obtained at 1—3$\frac{3}{8}$, and it will not be safe to take the remainder at a higher exchange than 1—2$\frac{1}{2}$. The actual figures are :—

	Rs.	a.	p.
1st Instalment—			
£5,990 at 1—4$\frac{19}{32}$ on 4th January 1892.....	86,635	0	5
2nd Instalment—			
£5,990 at 1—3$\frac{3}{8}$ on 18th May 1892	93,502	7	0
3rd Instalment—			
£3,594 to be remitted before the end of September at 1—2$\frac{1}{2}$	59,486	14	4
4th Instalment—			
£5,990 before 10th October at 1—2$\frac{1}{2}$	99,144	13	3
5th Instalment—			
£2,396 in 1893 at 1—2$\frac{1}{2}$	39,657	14	11
Total...Rs.	3,78,427	1	11

or rather more than Rs. 40,000 over what would have been payable had exchange not sunk below 1*s.* 5*d.*

Under the circumstance no alternatives is open but to increase the sanctioned amount from Rs. 4,00,000 to Rs. 4,40,000, and to this I request sanction.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 6118. *Resolved* : "That letter No. 12511, dated 5th instant, from the Commissioner, be forwarded to the Corporation with a recommendation that sanction be given to the Loan works provision for the cost of pumping engines and boilers for the Love Grove Station being increased from Rs. 4,00,000 to Rs. 4,40,000, in order to meet the increased charges for the machinery consequent on the fall of exchange on England."

No. 6119. *Resolved* : "That sanction be given to the payment of Rs. 467-12-3 to Messrs. Richardson & Cruddas for castings supplied by them (*viz.*, cast-iron clamps for the 48" Tansa main and cast-iron packing plates). The charge to be paid out of the provision for pipes, special castings, &c., for the Tansa Works.

"That letter No. 12389, dated 3rd instant, from the Commissioner, reporting that the carrying out of certain miscellaneous works on the Tansa Duct line during March last, amounting to Rs. 2,085-0-5, were entrusted to Mr. Dhunjibhai Framji, be *recorded*."

Resolved : "That, as applied for by the Commissioner in his letter No. 12202, dated 1st instant, sanction be given to the payment of an acting allowance of Rs. 50 *plus* Rs. 30 per mensem as conveyance allowance to Mr. Pinto during the time he is in temporary charge of all the Municipal gardens. The amount to be paid out of the savings in the salary of the Superintendent of Gardens."

No. 6120.

Resolved : "That the following be *recorded* :—Letter No. 12200, dated 1st instant, from the Commissioner, reporting that he has accepted the offer of one Sha Mahomed Sharoobhoy for the supply of meat for animals in the Victoria Gardens for the current year at the following rates :—

No. 6121.

16 lbs. of beef for one rupee.

19 lbs. of goats' flesh for Rs. 3-8-0; the goats to be slaughtered at the Gardens.

Resolved : "That the following be *recorded* :—Letter No. 12087, dated 31st ultimo, from the Commissioner, reporting that the ground belonging to Mr. Damodar Tapidas near the Victoria Gardens was taken charge of from the Collector of Bombay on 24th June last, and as the ground could not be filled in during the rains, the following rights have been sold to one Mr. Tejpal Khetsey :—(1) for occupying the ground as a Grass Market, Rs. 250 a month, removeable at 7 days' notice ; (2) for cutting grass from a portion of the ground, Rs. 30 ; (3) rent of Rs. 35 per mensem for huts standing on the ground ; (4) for occupying two rooms of a chawl at Rs. 8 per mensem each, Mr. Tejpal Khetsey agreeing to turh out on 24 hours' notice after 30th instant."

No. 6122.

In accordance with notice it was proposed by A. G. Viegas, Esq.—

"That the Municipal Commissioner be requested to state (1) what steps he has taken to prevent the further subsidence of the Gibbs Road and the cause or causes which led to the sinking of the road ; (2) what measures have been adopted for relaying the Tulsi water main along that road."

No. 6123.

The motion was seconded by Abdalla M. Dharamsi, Esq.

The Commissioner said he had taken no steps to prevent the further subsidence of the road, as it was impossible to take any such action while the heavy rain was falling, and the heavy floods precluded the Road Department from moving in the matter.

The "cause or causes" of the subsidence was or were, the floods caused by the very heavy rains; but on this head, the Acting Executive Engineer would report in detail. As the weather is now clearing, measure will be taken for restoring the road as soon as practicable.

In regard to the line of the Tulsi main, it was laid in its present position on the eastern side, because the western side of the road is very rocky, and would have necessitated a great deal of blasting, and because it was more secure in that position.

Measures are being taken for restoring the supply to the reservoir by an 18" main for the present, as there are not sufficient spare 24" pipes available, and by the courtesy of the Parsi Punchayat and their Secretary, Mr. Nasserwanji Byramji, this temporary main will be laid through land belonging to the Punchayat, the pipes resting partly on the ground and partly on tressels. A special casting required for the work is being made by Messrs. Richardson & Cruddas. If this casting was supplied within the time expected, the supply to the reservoir should be resumed in three or four days. The connection with the 9" main at a point below where the subsidence of the road terminated, for the supply of the Cumballa Hill district, has already been completed.

Mr. Viegas expressed himself satisfied with the statement of the Commissioner, and thanked that officer for the same.

In accordance with notice, it was proposed by Kaikhosro N. Kabraji, Esq.—

No. 6124. "That the Municipal Commissioner be requested to take immediate steps in order to prevent the serious and frequent flooding of the Thakordwar Road at its junction with the Queen's Road in the monsoon, causing great inconvenience and annoyance to large numbers of foot passengers along that road."

The motion was seconded by Bhalchandra K. Bhatawadekar, Esq., and *carried*.*

No. 6125. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 12367, dated 3rd instant, sanction be given under section 91 of the Municipal

* With the permission of the Chairman the following Notice of Motion was withdrawn by Mr. Kabraji:—

"That the Commissioner's attention be drawn to the very late hour at which the gas lamps along the Thakordwar Road are lighted for more than a month past, and to propose, if necessary, that the Commissioner be requested to put into force the penalty clause in the agreement with the Bombay Gas Company for the short supply of gas to these lamps.

Act, to his applying to Government for the acquisition, under the Land Acquisition Act, of 810·78 square yards, or thereabout, of ground, the property of Messrs. Janardhan Purshotum and Bhasker Narayen, situate at Love Grove, as shown on plan marked A, dated this day, and filed in Supplement to Minute Books, the said ground being required for the new Engine-house. The cost to be paid out of the grant for the new station works."

No. 6126. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 12328, dated 2nd instant, and with reference to the resolution of the then Town Council, No. 190, dated 13th May 1885 (authorising conditionally, the non-enforcement of the set-back of Mr. Goswami Girdharilal Tricumjee's property, situate at Bhuleshwar) sanction be now given to the service of the notice submitted with the letter requiring the removal of the structure as it projects beyond the regular line of the street."

The consideration of the question of a column being added in future Budget Statements showing the revised estimates for the then current year based on the actuals of the first six months of the year was postponed till next meeting.

No. 6128. *Resolved* : "That the Corporation be recommended to inform the owners of houses and residents of Dukergully, in reply to their petition dated 6th June last, in the following terms:—

"That it is not necessary to lay a larger main in the locality in question, the consumption being 18,000 gallons per day, the water rate on account of which is Rs. 384-7-8 per annum, equal to one anna per 1,000 gallons, a much lower rate than that charged to charitable institutions, *viz.*, 4 annas per 1,000 gallons.

"That the pipes attached to many of the houses are old and corroded, and if they are renewed, a good supply of water will be obtained.

"That the lane in question is in a fair condition, and that the loose metal spoken of is attributable to the surface in one part having been disturbed by erecting mandaps for marriages and in other parts to the rain falling from roofs of houses, there being no gutters or down pipes to the roofs.

"That the road being private, it cannot be watered by the Municipality.

"That the lane is sufficiently well lighted, there being three lamps, including one recently put up. That they are lighted at the proper time and burn well.

"That the stables are built in accordance with Municipal requirements; they are well ventilated, properly paved and drained. That the owner has commenced building a wall 8 feet high between his compound and the lane, which, it is hoped, will remove the cause of complaint.

"That, if the owners wish the lane to be taken over by the Municipality, they should comply with the terms of Section 306 of the Act."

The following return was read and *recorded* :—

Return of fires at Lady Jamsetji Road (Mahim) and Mahalakshmi Road, forwarded with the Commissioner's memorandum No. 12449, dated 5th September 1892. *

The following statement † was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 4th September 1892.

BOMBAY, 14*th September* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L.M.&S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C. S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 7th instant, were signed.

No. 6288. The seal of the Corporation was affixed to deed of contract with Mr. Balkrishna Jugganath, for the supply of boundary stones for the land occupied by water mains.

The seal was also affixed to deed of agreement between Bai Jerbai, widow of Mr. Framji Dhunjibhai, and the Corporation, securing to the Municipality the right to acquire at any future time the set-back of property situated at No. 19-27, Suparibag Road, without payment of any compensation in respect of the unauthorised work indicated on the plan annexed to the deed, and at the rate of Rs. 6 per

* *See* Appendix C. † *See* Appendix B.

square yard, for any land shewn on the plan and scored red to be there taken up, inclusive of any loss, damage or expense sustained by her by reason of such acquisition.

No. 6289. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 13016, dated 12th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structure built without permission :—

Name of owner.	Where.
Mr. Gondaji Piraji...	Building at No. 50, Kamathipura 6th Street."

The consideration of the question of the removal of the following unauthorised structure was postponed till next week :—

Name of owner.	Where.
Mr. A. J. DeSouza...	Building at Sion Agarwada.

No. 6290. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 13314, dated this day, sanction be given to the cutting off of water connection as per list submitted therewith."

Read the following :—

No. 12912 OF 1892-93.

BOMBAY, *9th September* 1892.

To THE MUNICIPAL SECRETARY.

SIR,—I have the honour to forward tabulated tenders for the erection of the engine and boiler house at Love Grove with the Engineer's letter thereon. There are only two tenders within the Municipal Estimate, and for the reasons given by the Engineer, with which I entirely concur, I recommend the acceptance of Messrs. Sitaram Luxuman and Bibra's tender.—I have, &c., H. A. ACWORTH, Commissioner.

No. $\frac{G}{2220}$ OF 1892.

9th September 1892.

To THE COMMISSIONER.

SIR,—I have the honour to return the accompanying 8 tenders received with your No. 12244, dated 2nd September 1892, for the works in construction of new engine boiler house, &c., &c., at Love Grove with a tabulated statement marked $\frac{A}{7992}$.

2. The estimate for these works, after deducting 10 per cent. for contingencies, amounts to Rs. 57,623·47.

3. There are only two tenders below the estimated amount, and those alone therefore call for consideration ; one is from Messrs. Damodar and Dinshaw Bhedwar & Co. and the other from

Messrs. Sitaram Lakhsuman and Bibra, amounting, respectively, to Rs. 57,289·89 and Rs. 57,886·84, Messrs. Damodar and Dinshaw Bhedwar & Co. being the lowest, the difference being Rs. 596·95.

4. There are several serious points to be considered with reference to this work and the letting of the contract for the same, into which the question of time enters very largely.

5. It is absolutely necessary that the foundations up to the level 78·50 T. H. D., which is the maximum height to be let under this contract, should be finished by the end of December 1892, to allow of the brickwork being built on which the engines are immediately placed. It has been found by borings that the foundation will have to go to a depth of 35 feet throughout. It is right to assume that at the end of the S. W. Monsoon a large quantity of sub-soil water will be met with and that therefore the getting out of these foundations in a comparatively limited space will be a matter of difficulty. The actual fixing of engines and boilers will not take less than four months, so that very little margin is left between the time of completing the foundations and the getting of the engines in working order before the next year's rains set in. That they should be ready then, is a matter of paramount importance. The recent heavy rains have shown the inability of the present pumping power to cope with the sewage, as for ten days the sewers were but little better than settling tanks and much of the good work of clearing the silt has been undone.

6. I am, therefore, not prepared to recommend for your acceptance the lowest tender, namely, that of Messrs. Damodar and Dinsha Bhedwar & Co., for I do not consider them sufficiently practical men to undertake a work which has such issues at stake.

7. I would recommend the acceptance of the tender next above the lowest, namely, that of Messrs. Sitaram Lakshuman and Bibra. I understand that Mr. Sitaram Lakshuman has recently taken into partnership Mr. L. Von Bibra, who was previously the managing agent of Messrs. Walsh, Lovett & Co., and who brought the Tansa Duct construction to a successful completion. He is a man of very great experience and practical knowledge, and the Municipality will be very fortunate in obtaining in this way his services, which will be a guarantee of the thoroughness of the work. I would, however, ask that this course be sanctioned only on condition that Mr. Bibra lives at Love Grove during the progress of the work. Considering that the tender is not actually the lowest, I do not think this would be insisting upon anything unreasonable.

8. I feel considerable anxiety and responsibility regarding this work, knowing full well the paramount necessity of getting the new pumps into working order in a limited space of time before the rains of 1893. Everything depends upon the successful completion of the foundations by the end of December 1892.

9. I had serious thoughts of recommending that the work should be done departmentally, but on further consideration I think that the proposals I now make are the best.

10. The favour of your early sanction is solicited so that the contractors may be enabled to make arrangements at once to get their materials on the ground.—I have, &c., JAMES W. SMITH, M.I.C.E., Acting Executive Engineer.

Proposed by Grattan Geary, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

No. 6291. "That, as applied for by the Commissioner, in his letter No. 12912, dated 9th instant, sanction be given to the acceptance by him of the tender of Messrs. Sitaram Lakshuman and Bibra for the erection of the engine and boiler house at Love Grove amounting to Rs. 57,887, the cost to be met from the sanctioned provision for the work."

Carried.

No. 6292. *Resolved*: "That the following be *recorded* :—Letter No. 12805, dated 8th instant, from the Commissioner, reporting, as required by section 69 (*d*) of the Act, that he has entrusted the execution of certain petty works along the line of the Tansa Duct amounting to Rs. 1,746-1-1 to Mr. Dhanjibhoy Framji. The amount to be paid out of the sanctioned provision for minor special works in connection with the construction of the duct from the dam to Ghatkopar."

Further consideration of the question of a column being added in future budget statements showing the revised estimates for the then current year based on the actuals of the first six months of the year, was postponed till next week.

No. 6293. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 12896, dated 9th instant, sanction be given, under section 92 (*b*) of the Municipal Act, to his leasing to Mr. Mubarak Hasan, 700 square feet or thereabout of ground, situate at the Mahalaxmi Dhobiwada for the purpose of washing clothes by steam for a period of two years and on the following conditions :—(*a*) That he pays a monthly rent of Rs. 7 for the ground. (*b*) That he removes all structures, &c., erected by him at his own cost, restores the land to its former state and gives clear possession of the ground on receiving a month's notice from the Commissioner. (*c*) That he pays all the expenses connected with the drawing up, stamping and registering of the lease."

Resolved : "That, as applied for by the Commissioner, in his letter No. 12678, dated 7th instant, the Corporation be recommended to sanction the raising of the pay of two of the firemen at Love Grove pumping station from Rs. 15 to Rs. 18 per mensem. The amount to be met from savings in the grant for establishment for the current year."

No. 6294.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 13028, dated 12th instant, sanction be given, under section 69 (*c*) of the Municipal Act, to the variation of the contract with the Indian Patent Stone Co., so as to allow of the same being entered into with the 'Garlick Indian Patent Stone Co.,' as Mr. Garlick has purchased the sole rights for the Bombay Presidency and the Nizam's Dominion and is trading under the name of the 'Garlick Indian Patent Stone Co.' "

No. 6295.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 12944, dated 10th instant, sanction be given to the payment of certain extra items which were not included in the schedules of the piece work contractors for the house connections work in the first drainage section, according to the rates submitted, with the Executive Engineer's letter, to the Commissioner, No. D 3231, dated 24th ultimo."

No. 6296.

Resolved : "That, as applied for by the Commissioner, in his letter No. 12960, dated 10th instant, sanction be given to the rate of Rs. 5 (sanctioned by the late Town Council in their resolution No. 1435, dated 2nd December 1885, to be paid for 10·72 square yards of land to be acquired for street improvement purposes at the junction of Chaopati and French Roads, the property of Mr. Gellabhoy Hurridas) being increased to Rs. 12 per square yard, as the land in the above locality and on the opposite side was paid for at the same rate, *viz.*, Rs. 12 per yard."

No. 6297.

Resolved : "That the following be *recorded* :—Letter No. 13097, dated 12th instant, from the Commissioner, reporting that he has accepted the tender of Messrs. Spencer & Co., the lowest of three tenders received, for laying water tables and kerb stones in connection with the paving of footpaths in different parts of the city. The amount, Rs. 4,018, to be met out of Rs. 50,000 provided for the paving of footpaths for the current year."

No. 6298.

Resolved : " That the following be *recorded* :—Letter
No. 6299. No. 11642, dated 27th ultimo, from the Commissioner, forwarding lists, giving the size, length and value of iron pipes available in the Municipal stores, and also lying spare on the pipe lines of the Vehar, Tulsi and Tansa Lakes, beginning with 3″ and ending with 48″."

The further consideration of letter No. 11619, dated 27th ultimo, from the Commissioner, reporting on the Accountant-General's letter on the account system of the Municipality, and forwarding memorandum No. 1707, dated 17th idem, from the Chief Accountant, was postponed till next week.

Resolved : " That the following be *recorded* :—Memo-
No. 6300. randum No. 11357, dated 23rd instant, from the Commissioner, forwarding, with reference to the late Town Council's resolution No. 1444, dated 22nd December 1886, letter No. 1743, dated 20th ultimo, from the Chief Accountant, enclosing 11 statements, marked A to K, showing estimated cost of each loan work and expenditure thereon up to 31st March 1892." *

Resolved : " That, as applied for by the Commissioner, in
No. 6301. his letter No. 13098, dated 12th instant, sanction be given to the following persons being allowed to contribute to the Pension Fund from the date of their permanent appointment, *viz.*, 1st March 1892 :—Mr. Mahomed Valud Abukaji, Sub-Inspector, Tansa Water Works, and Ramchander Shivram, peon, ditto."

Resolved : " That the following be forwarded to the Com-
No. 6302. missioner for favour of report :—Resolution of the Corporation, No. 6243, dated 8th instant, as under :—' That the following be forwarded to the Commissioner, and the Standing Committee for report :—Government Resolution No. 1553, P. W. Department, Railway, dated 6th August 1892, on the subject of the construction of overbridge across the G. I. P. Railway at Frere Road, Wari Bunder, at a total cost of Rs. 7,58,065.' "

Resolved : " That the following be laid on the table :—
No. 6303. Letter, dated 7th instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of receipts and disbursements at the end of each week for the month

* See Proceedings of the Standing Committee, dated 31st August 1892.

of August last, and compared them with the general and subsidiary ledgers and journals and found them correct. Forwarding the usual summary and statements of their scrutiny of the accounts."

No. 6304. *Resolved*: "That the following be *recorded*:—Memorandum No. 12526, dated 6th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 3rd idem."

No. 6305. *Resolved*: "That the Corporation be recommended to inform Mr. Goolam Mohedeen bin Fukrudeen Mukri and others, in reply to their petition, dated 10th ultimo, complaining of the bad condition of Undria Street, that the street is being repaired."

No. 6306. *Resolved*: "That the following be *recorded*:—Memorandum No. 12938, dated 10th instant, from the Commissioner, forwarding analyses of water as under, stating that the water-supply is unusually pure."

Sample of unfiltered Tulsi water obtained from the Inlet Well of the Malabar Hill Reservoir on the 1st September 1892.

	Parts per million.
Free Ammonia	·01
Albumenoid Ammonia	·06

Sample of filtered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 1st September 1892.

	Parts per million.
Free Ammonia	·06
Albumenoid Ammonia	·02

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir on the 1st September 1892.

	Parts per million.
Free Ammonia	·02
Albumenoid Ammonia	·07

Sample of Tansa water taken from the 27" main in Arthur Road, on the 1st September 1892.

	Parts per million.
Free Ammonia	·005
Albumenoid Ammonia	·04

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 11th September 1892.

* *See* Appendix **B**.

BOMBAY, 21*st September* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M. ; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; KAIKHOSRO N. KABRAJI, Esq. ; K. M. SHROFF, Esq. ; R. G. OXENHAM, Esq., M.A. ; A. G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner ; the CHIEF ACCOUNTANT ; and the SECRETARY.

The minutes of the meeting held on the 14th instant, were signed.

No. 6518. The seal of the Corporation was affixed to—(1) 2 subdivided debentures of the Tansa Water Works Loan, Nos. 28987 and 28988, of Rs. 500 each ; (2) 10 attested duplicate debentures of the Municipal Loan of 1878, Nos. 1908 to 1914, 4883, 4912 and 4913, of Rs. 500 each ; (3) 3 attested duplicate debentures of the Municipal Sanitary Works Loan of 1885, Nos. 2417 N. N., 2418 N.N., and 2752 N. N., of Rs. 500 each; and (4) 28 consolidated debentures of the Municipal Loan of 1878, Nos. 3180-81 to 3234-35, of Rs. 1,000 each.

The seal was also affixed to deeds of agreement (1) between Mr. Venkuji Narsuji and the Corporation, securing to the Municipality the right to acquire at any future time the set-back of property situate at Nos. 145-157 and 135-139 at the junction of Kamathipura 13th Street and Kamathipura Central Road, without payment of any compensation in respect of any superstructure standing within the regular line of the street, and at the rate of Rs. 10 per square yard, for any land shewn on the plans and scored red to be there taken up after the expiration of ten years from the date of this indenture, inclusive of the superstructure standing thereon and of any loss, damage or expense sustained by him by reason of such acquisition ; (2) ditto ditto with Mr. Kutubudin Amir Sahib in respect of property situate at No. 52, Kamathipura 1st Street, ditto ditto at the rate of Rs. 10 per yard for any land shown on the plans and scored red to be there taken up, inclusive of the superstructure standing thereon, and of any loss, damage or expense sustained by him by reason of such acquisition ; and (3) ditto ditto with Nurbibi, widow of Janu Sarang, in respect of her property No. 32-34, Huzria Street, ditto ditto, at the rate of Rs. 7 per yard for any land shown on the

plans and scored red to be there taken up, inclusive of the superstructure standing thereon and of any loss, damage or expense sustained by her by reason of such acquisition.

No. 6519. *Resolved* : " That, as applied for by the Commissioner, in his memoranda No. 12657, dated 7th instant, Nos. 13403 to 13407, dated 15th idem, and Nos. 13496 and 13497, dated 19th of the same, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.		Where.
Mr. A. J. D'Souza	Building at	Sion Agarwada.
,, Munji Karrim	Do.	Mugbhat Street.
,, Raoji Parashram	Do.	Parel Village.
,, Dewji Kanji	Do.	Charni Road.
,, Shivlal Motilal	Do.	No. 1175, Parel Tank Road.
Bai Ashibai, widow of Pestonji Jamasji	Do.	Mount Road, Narelwadi.
Mr. Jamsetji Navroji Daruwalla	Do.	No. 50-52, Chandanwadi.
,, Sherifbhoy Thavor	Do.	Old Race Course, Agripada."

No. 6520. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 13761, dated this day, sanction be given to the cutting off of water connection as per list submitted therewith."

Considered the question of a column being added in the future budget statements showing the revised estimates for the then current year based on the actuals of the first six months of the year.

Proposed by Javerilal Umiashankar Yajnik, Esq., seconded by Colonel Wilson—

No. 6521. " That the Commissioner be requested to submit to the Corporation, in time for discussion, with budget estimates, revised estimates for the then current year based on the actuals of the first nine months of the same, plus estimates for the three remaining months."

Carried by 4 votes *against* 1.

No. 6522. *Resolved* : " That the following be *recorded* :—Letter No. 13439, dated 15th instant, from the Commissioner, reporting that he has entrusted the work of paving verandahs on the ground floors of the halalkhors' chawls in Khurshedji Suklaji Street, with Indian patent stone, to the Garlick Indian Patent Stone Company. The cost, Rs. 1,741, to be met out of savings on the grant for the work."

Proposed by Grattan Geary, Esq., seconded by R. G. Oxenham, Esq.—

No. 6523. "That, as applied for by the Commissioner, in his letter No. 13462, dated 15th instant, sanction be given to the work of laying down Indian patent stone one inch and a half in thickness in the Foras Road new market and the new mutton market, Crawford Markets, being entrusted to the Garlick Indian Patent Stone Company, at the rate of Rs. 47 per 100 square feet.

"The amount to be met from the provision for the respective works.

"That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as the Company is the only one in Bombay dealing in the said stone."

Amendment, moved by Kaikhosro N. Kabraji, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

"That before a contract is entered into with the Garlick Indian Patent Stone Company for the paving of markets, the Commissioner be requested to obtain a guarantee from the Company for the maintenance of the pavement for five years."

The amendment was *lost*, the votes being 2 *for* and 6 *against*. The original motion was *carried* by 7 votes *against* 1.

No. 6524. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 13511, dated 19th instant, the Corporation be recommended to sanction the payment of Rs. 4,562 from surplus* cash balance towards meeting the cost of constructing a latrine, on the site leased from Government in the Charni Road gardens. The balance of the amount, *viz.*, Rs. 1,657, to be met from savings in the grant for latrines and urinals."

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* The state of the surplus cash balance is reported by the Chief Accountant to be as under: —

	Rs.	a.	p.
Reserved for probable extra grant up to the end of 1892-93 (see Introduction to the Budget for 1892-93)	79,703	0	0
Deduct—			
Amount of grants already sanctioned (excluding temporary advances to be adjusted hereafter)...	43,810	2	7
Available Rs....	35,892	13	5

Proposed by Bhalchandra K. Bhatawadekar, Esq., seconded by Hurkisondas Nurotumdas, Esq.—

"That, in forwarding the Health Officer's report* for the second quarter of 1892 to the Corporation, the Standing Committee recommend the purchase of a small steam fire engine for the flushing of house gullies as suggested by the Health Officer."

No. 6525.

Carried.

Resolved: "That the consideration of the Commissioner's Administration Report be postponed until the next meeting and in the meantime draft review of the same be circulated to members."

No. 6526.

Resolved: "That the following be *recorded*:—Memorandum No. 13129, dated 13th instant, from the Commissioner, forwarding letter No. 2006, dated 12th idem, from the Chief Accountant, reporting, with reference to the resolution of the Committee No. 2969, dated 29th June last, that a further lot of 4 per cent. Government paper (Rs. 1,00,000) belonging to the surplus cash deposit account was sold on 7th instant, at Rs. 104⅛ per cent."

No. 6527.

Resolved: "That, as applied for by the Commissioner, in his letter No. 13202, dated 13th instant, sanction be given, under section 240 of the Municipal Act, to Mr. Ardasir S. Cooper being allowed to carry out the following works in connection with the drainage of his house No. 7-9, 4th Marine Street, under the conditions prescribed in the resolution of the Committee No. 5961, dated 24th September 1890, *viz.*, (*a*) laying of a 6″ pipe drain in concrete, nowhere less than 6″ thick, in place of the existing masonry drain that runs through the premises; (*b*) fixing a 9″ × 9″ gully trap at the head of the drain to receive the sullage from the gullies and connect it to the aforesaid 6″ pipe drain; (*c*) replacing a 6″ siphon in the place of existing gully traps in the chamber on the road side."

No. 6528.

Resolved: "That the following be *recorded*:—Memorandum No. 13122, dated 13th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the week ending 10th idem."

No. 6529.

Resolved: "That the following be *recorded*:—Memorandum No. 13408, dated 15th instant, from the Commissioner, reporting, with reference to the resolution of the Committee No. 4484, dated 3rd

No. 6530.

* *See* Appendix A.

October 1888, the transfer of Rs. 36,068-13-2—(1) of Rs. 9,124-9-2, from the Surplus Cash Deposit account to the Municipal General Fund pass-book on 8th instant; (2) of Rs. 3,092-2-0, from the 44 Lakhs Sanitary Works Loan Deposit account to ditto on ditto; (3) of Rs. 1,997-8-0, from the Rs. 10,08,500 Miscellaneous Works Loan Deposit account to ditto on ditto; and (4) of Rs. 21,854-10-0, from the 35 Lakhs various Sanitary Works Loan Deposit account to ditto on ditto."*

The further consideration of letter No. 11619, dated 27th ultimo, from the Commissioner, reporting on the Accountant General's letter on the account system of the Municipality and forwarding memorandam No. 1707, dated 17th idem, from the Chief Accountant, was postponed for a fortnight.

Considered resolution of the Corporation No. 6472, dated 15th instant, on the subject of the erection of an obelisk or column at Tansa.

No. 6531. *Resolved*: "That the Commissioner be asked to estimate the cost of the obelisk or column at Tansa referred to in resolution of the Corporation No. 6472, dated 15th instant."

No. 6532. *Resolved*: "That the following be forwarded to the Commissioner for disposal, and that the applicant be informed accordingly:—Letter, dated 14th instant, from Memon Hadji Mahomed Lutiff & Co., complaining of the bad condition of Coombarwada Street, Lower Mahim."

The following return was read and *recorded*:—

Return of fires at Coliwada Cross Road (Sewri) and Bengalpura, forwarded with the Commissioner's memorandum No. 13498, dated 19th September 1892.†

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* The Chief Accountant reports that the balance standing to the credit of the respective deposit accounts after effecting the transfers are as under:—

				Rs.	a.	p.
In cash				1,05,069	5	4
„ 5 per cent Municipal Debentures for Rs.	17,66,500	= Rs.	17,66,500	0	0	
„ 4 per cent Government paper for ... „	5,13,000	= „	5,11,806	9	0	
				22,78,306	9	0
			Rs.	23,83,375	14	4
In 4 per cent. Government paper for Rs.	6,20,000	... ...		6,06,808	8	3
„ Do. do. „	1,00,000	... ...		99,625	0	0
„ Do. do. „	14,54,100	... ...		14,99,866	12	0
			Total Rs.	45,89,676	2	7

† *See* Appendix C.

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 18th September 1892.

Resolved :" That, with reference to the letter to the Municipal Secretary, dated 10th August 1892, from Messrs. Turner & Hemming, on behalf of their client, Mr. Nathu Mulji, the Corporation be informed that the Commissioner states that the drainage contractor has repaired the cracked wall of the house in Vithalwadi Cross Lane, and that should it be found necessary to replace the wall by a new one, the contractor will be compelled by the Commissioner to rebuild it."

No. 6534.

Resolved : " That, as applied for by the Commissioner, in his letter No. 13801, dated this day, sanction be given to the acceptance by him of the tender of Messrs. Behramji Jehangirji & Co., the lowest of four tenders received, for the work of paving footpaths with blue trap-stone in different parts of the City at a cost of Rs. 13,795-8-0. The amount to be met out of the grant of Rs. 50,000 for paving footpaths."

No. 6535.

BOMBAY, 28*th September* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C.; *Chairman.*
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA K. BHATWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; A. G. VIEGAS, Esq., L. M. & S. H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 21st instant, were signed.

The seal of the Corporation was affixed to deeds of contract (1) with Mr. Kaikhosru Dossabhoy Framji, for the removal of blood from the Bandora Slaughter Houses, and (2) with Messrs. Killick, Nixon & Co. for the supply of 300 tons Powell's Duffryn Cardiff coal.

No. 6734.

The seal was also affixed to deed of assignment of land acquired from Mr. Shapurjee Jeewajee for the Colaba Market. Also to two attested duplicate debentures of the

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* *See* Appendix B.

Municipal Loan of 1878, Nos. 1573 and 4573 of Rs. 500 each, and to one consolidated debenture of ditto, No. 1571-2 of Rs. 1,000.

No. 6735. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 13830, dated 22nd instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structure built without permission :—

Name of owner.	Where.
Haji Sulleman Haji Latiff ...	Building at Mahim Bazar Road."

No. 6736. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 14333, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 6737. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 14039, dated 24th instant, sanction be given to the acceptance by him of the tender of Messrs. Mistri, Bhedwar & Co., the lower of the two tenders received, for constructing latrines and urinals at Mumbadevi Road and Jakeria Musjid Street. The cost, Rs. 5,123, to be met out of the grant for latrines and urinals."

No. 6738. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 14038, dated 24th instant, sanction be given to his purchasing from Messrs. Kharsedji & Sons, of Kirkee, 59 pairs of bullocks at Rs. 150 per pair, and 35 pairs at Rs. 120 per pair, for the Health Department ; the cost to be met out of the grant of Rs. 13,050 for the purchase of bullocks.

" That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders, which would otherwise be necessary, as Messrs. Kharsedji and Sons have for many years past supplied this Municipality with bullocks, and are specially engaged in the trade."

No. 6739. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 14021, dated 24th instant, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 656 from savings in the Public Health Department, conservancy branch, section 2, labour A, scavengering, to 4, repairs, same branch, to meet the cost of metalling the ground in front of E ward stables

at Kamathipura, as no provision was made for this work in the budget for 1892-93 and the ground is in very bad order."

The draft "Review" of the Commissioner's Administration Report for 1891-92, which had previously been circulated, was considered in detail and, with certain additions and alterations as shown in the Secretary's copy marked "A," was adopted as under :—

1. The principal events of the year were the opening of the Tansa Water Works on 31st March last, by His Excellency the Viceroy, the most Honorable the Marquis of Lansdowne, who in the course of his address to the Corporation was pleased to remark that "Bombay may claim for itself the credit of having been the City which was the first to introduce into India a true measure of Municipal self-government," and at the same time His Excellency expressed the hope that the Tansa water might, for many generations to come, bring into this great City an unstinted measure of health, comfort and prosperity. The Committee feel pleasure in reminding the Corporation that a few months before the opening of the works, His Excellency, on the strong recommendation of His Excellency the Governor of Bombay, acceded to the request of the Corporation that the periods for the repayment of the 5th and 6th instalments of the loan for defraying the cost of Tansa be extended to 50 and 60 years, respectively.

2. During the year Government came to the decision that the sewage outfall of the City must remain at Love Grove instead of being diverted to Colaba.

3. As Government requires that the Corporation shall maintain a hospital for the treatment of infectious diseases, whether such diseases are epidemic or not, and as the Municipality have been called on to bear largely enhanced charges on account of the Police, it has been decided to submit memorials to the Government of India and the Secretary of State respectively, praying for relief from the action of the Local Government in these respects.

4. The Bank of Bombay having declined to continue the payment of interest on large deposits of Municipal funds held by it, the Corporation applied to Government for a modification of the clause in the Municipal Act which provides

that all Municipal funds not required for current charges may be deposited "with the bank for the time being appointed to receive Government dues." The matter is still under the consideration of Government.

5. In October last, the Corporation decided that their best thanks be offered to Mr. (now Sir Charles) Ollivant, with the expression of their appreciation of the able manner in which, at the International Congress of Hygiene and Demography, held in London the previous August, he advocated the claims of the Municipality upon Government in regard to facilities for raising loans required for the further improvement of the sanitation of Bombay.

6. *Income.*—The opening balance, including recoverable advances, &c., and excluding deposits and other minor adjustment items, was Rs. 17,29,269-14-4, or Rs. 12,99,269-14-4 more than the Budget estimate. Of these, Rs. 12,99,269-14-4, however, Rs. 5,49,481-8-7 represented the unexpended balance of lapsed grants for 1890-91, renewed in 1891-92. Deducting this sum, and reserving Rs. 2,50,000 temporarily paid out of surplus cash balance for improvements in Victoria Gardens, the remaining portion of the balance, Rs. 4,99,788, or say 5 lakhs, not having been appropriated, formed part of the opening balance for 1892-93. The revenue exceeded that of the previous year by Rs. 2,23,521-5-10, and whilst it fell short of the estimate under certain heads by Rs. 1,00,384-2-2, it was better than the estimate under other heads by Rs. 4,15,412-14-4.

7. The total revenue of the year was Rs. 60,84,703-12-2, or Rs. 3,15,028-12-2 above the estimate. The greater portion of this last mentioned increase was derived from the General tax (Rs. 1,80,545-5-5) and miscellaneous receipts from properties, and interest and profit on loan and reserve funds investments Rs. 1,75,366-4-3. By far the greater part of this increase in the General tax was due to the fact that under the award of Mr. F. W. Stevens, dated 18th June 1891, the amount payable by the Secretary of State for India in Council under section 144 of the Municipal Act in lieu of the General tax, was increased from Rs. 50,000 to Rs. 1,05,839 per annum, and that under such award the arrears payable by Government for the years 1889-92 amounted to Rs. 1,66,958-1-8.

8. The appreciable increase in the receipts from Property and Miscellaneous was the result of making advances from current revenue on account of Loan Works expenditure, thereby keeping invested Loan Funds and interest-bearing deposits untouched for as long as possible; of advantageous sales of securities on opportune occasions, and of the enhancement of the yield from License Fees, Public Gardens and Miscellaneous Fines and Receipts.

9. The amount of Wheel tax and Toll fees was better than the estimate by Rs. 33,273-3-7 and that of Tobacco duty by Rs. 18,350-14-0. The Halalkhore tax showed a small increase of Rs. 7,877-3-1. On the other hand there was a falling off in the estimates of Town duties, Rs. 59,777-14-9, of Rs. 39,331-6-0 from Water tax, and of Rs. 1,274-13-5 from Market receipts. The reasons for these decreases are attributed to the fact that there were large outstandings on account of Water tax at the close of the year and that there was a considerable decrease in the Sugar trade.

10. The expenditure from the Municipal Fund proper, amounted to Rs. 56,70,686-0-9, and that on account of Loan Work Funds, to Rs. 34,20,539-2-4, or in all Rs. 90,91,225-3-1.

11. The expenditure from the Municipal Fund proper was Rs. 10,52,396-1-2 less than the sanctioned amount. But of this last, Rs. 5,44,727-14-1 have to be, or have been, paid during the current year for unpaid liabilities and works deferred until this year; so that the actual saving is only Rs. 5,07,668-3-1, of which Rs. 1,96,232 was in the Engineer's Department (Rs. 1,35,146 on establishment, labour, purchase of materials, cart hire, gas and kerosine oil lighting, and Rs. 61,086 on electric lighting). In the Health Department Rs. 1,43,193 less than the sanctioned expenditure was incurred, as the entire scheduled strength of employés and carts was not worked up to, and there were savings in the grants for water, &c. Another item of saving was Rs. 94,057 on account of debt charges; of this Rs. 87,000 were due to the deferring, till the 24th December, of the taking up of the sixth instalment of the Tansa loan and of the Municipal Building loan of eight lakhs. The net increase in expenditure over the actuals of the previous year was Rs. 1,17,654-8-8.

12. *Loan Expenditure.*—The expenditure during the years 1887-92 from Loan Funds on Tansa and other water works, sewerage works, markets, roads, and minor sanitary and other works has been Rs. 1,79,56,610-15-0.

13. *Assets and Liabilities.*—In para. 42 of his report, the Commissioner gives a statement of the assets and liabilities of the Corporation on the 31st March, in which the total assets are taken at Rs. 5,27,92,795-4-3, as follows :—Investments of surplus current and loan balances and of sinking and building insurance funds, &c., Rs. 83,57,757-9-1 ; advances, departmental, and to contractors Rs. 38,656-14-10; Municipal property (1) lands and buildings, Vehar, Tulsi, Pawai and Tansa, &c., Water Works, Rs. 3,34,54,523-8-2 ; (2) roads, bridges and other improvement works, Rs. 91,62,097-7-5 ; (3) Stock (personal account and Live Stock*), Rs. 17,79,759-12-9. The total liabilities are taken at Rs. 3,70,47,130-15-8, namely, various loans, Rs. 3,59,40,041-2-1 ; deposits by contractors, Rs. 10,77,705-5-11 ; Adjustment item (reserved for Loan Work Establishment), Rs. 29,384-7-8. Total value of assets over liabilities, Rs. 1,57,45,664-4-7.

14. *Registration and Valuation.*—On 31st March the number of properties on the Assessment book was 51,135, showing an increase of 262 in the year. Of the total, 38,023 were assessed to the General tax, 5,419 were exempted or compounded for on special terms, whilst 7,693 were small plots of unproductive land for which no bills are issued. The total valuation was Rs. 2,85,80,023, of which only Rs. 2,36,61,803 were chargeable with the General tax. During the year 489 buildings were demolished, 541 new ones were erected, and 210 existing properties were sub-divided.

15. Regarding the question of outstanding bills, the total amount of these (Rs. 4,53,727-15-11) at the close of the twelve months was even larger than it was at the end of the previous year. It appears, however, that by the 31st of July last Rs. 2,16,615-15-6 of the total had been recovered. There was likewise an outstanding, Rs. 17,099-14-3, on account of Wheel tax, of which, however, Rs. 5,859-3-8 were collected up to 31st July. Of the defalcations in former years of the Ward

* *Vide* pages 181-2.

Clerks, Jamsedjee Muncherjee Hakim and Manekjee Adarjee, Rs. 29,891-4-6 have been written off, Rs. 2,000 have been recovered from a surety, and Rs. 582-13-2 remain as an outstanding for recovery from another surety.

16. There were only 52 appeals against Municipal assessment to the Chief Judge of the Court of Small Causes, of which 7 were dismissed, 6 allowed, 16 settled by consent, and 23 had not been disposed of at the close of the year.

17. *The Revenue Audit* branch report that the balances and books of the Ward Clerks were duly examined at the end of each quarter and the bills checked in detail. The original bills for taxes are not now allowed to be left with the rate-payers, a note merely of the amount of the bill being supplied until actual payment is made.

18. *Drainage.*—In order to provide for the efficient working of the Love Grove Pumping Station, a grant of Rs. 4,00,000 (since increased to Rs. 4,40,000 consequent on the continued decline in the exchange value of silver) was made for the purchase of four of Worthington's 15,000,000 gallon pumps and steam-engines, and the construction of houses for the same. The station is illumined by electric light, and another improvement has been effected by the purchase of coal direct from importers instead of from the bazaar. The work of putting in house connections in the first drainage section was proceeded with departmentally from the beginning of the year, under sanction from the Corporation, but at the present moment the work is suspended, pending the report of the Committee appointed to enquire into the sanitary effects of the connections already constructed. The laying of a pipe sewer from Parel Village to Parel Road *via* Government House Road was also sanctioned. Dr. McRury, the Sanitary Commissioner, having raised certain objections regarding the questions of concrete foundations for drains, the water-tight condition of pipe drains, the saturation of ground with sub-soil water and the removal of silt from the drains, a Committee of the Corporation conferred with him and passed a vote of thanks to him for the interest taken by him in these matters.

19. *Water Works.*—Reverting to para. 1 of this review, it is very satisfactory to note that the daily supply from Tansa may be taken at from 20 to 21 million gallons per diem instead of 17 millions as originally estimated by Mr. Clerke,

and that, with a dam nearly two miles in length and an impounded area of six square miles, a light rain-fall of forty inches is sufficient to fill the lake. With such sources of supply as those of Tansa, Vehar and Tulsi, there should always be an abundant supply of water of excellent quality. The Malabar Hill and John Hay Grant Reservoirs were under extensive repairs, and the Commissioner reports that the leakage in the former has been much reduced, whilst that in the latter has been brought down from 116,550 to 5,857 gallons per diem. In the course of the year, 14,100 feet of new mains were laid down and 2,391 feet of old pipes were renewed. The principal work was the laying of a 24″ main from Chaopati along the Queen's Road to the Fort for improving the supply thereat and at the Esplanade and Colaba. The old 32″ Vehar main was shifted from the site of the new Byculla Station of the G. I. P. Railway and taken along the DeLisle Road from Clerk to Haines Road. At the close of the year there were 172 dipping wells, drinking fountains, &c., supplied with water free of charge, and there was a net increase of 479 new connections, the total number of connections on 31st March being 18,113.

20. *Building By-laws, Roads, and Lighting.*—Although the draft building by-laws had not received the final sanction of Government on the last mentioned date, they have since been sanctioned and are now in force. As regards roads and streets, the new thoroughfare from Jackeria Bunder to Golanja Hill was completed, and negotiations were proceeded with for the acquisitions of land for a new road from Mahim to Matunga, for the "Connaught" Road from Parel Road to Ghorupdeo, for the construction of roads and streets in Agripada, &c. Falkland Road overbridge is to be constructed at the cost of the B. B. & C. I. Railway Company, the Municipal liability in the matter being limited to Rs. 22,000. The carrying out of the proposed large overbridge at Frere Road is still under consideration. Adverting to the subject of street lighting, the Commissioner states that the kerosine oil lighting, carried out departmentally, was more satisfactory than in any previous year, when done by contract.

21. *Fire Brigade.*—Considerable improvement is stated to have been made in the brigade; the men are constantly trained and instructed in the use of the fire-extinguishing

appliances, &c., and eventually the whole of the obsolete type of plant will be replaced by plant of the latest design. A successful parade of the Brigade was held in front of the Municipal Office on the 14th September in the presence of the Corporation.

22. *Public Health and Vital Statistics.*—The total number of deaths from all causes amounted to 23,847, equal, the Committee regret to observe, to a death-rate calculated upon the figures of the last census (1891) of 29·01 per 1,000 of population, an unusually high mortality, being 3,313 above the deaths in the previous year. The average of the five preceding years was only 25·69. The chief causes of death were measles 614, fever 6,837, pthisis 3,132, diseases of the nervous system 2,447, ditto of the respiratory system 4,379, diarrhœa 1,029, dysentery 472, accidents 364, small-pox 108, all other causes except still-born 4,301. Taking the deaths at different ages, by far the highest mortality was that among children under one year being 7,418, the next highest being that among persons of over sixty, 2,281. The lowest number of deaths was among children of from three to four years. The highest death-rate was among Bhatias, Hindu low-castes, Jains and Lingaits, 40·42, 42·50, 42·73 and 47·19 per 1,000 of population respectively; the lowest rate was amongst Europeans, Jews, Parsis, Native Christians and Brahmins, namely, 18·60, 20·91, 23·28, 23·52 and 23·66 respectively. Taking the deaths by localities, the ratios of mortality were, Kamathipura 44·41, Parel 43·21, Second Nagpada 42·41, Kharatalao 40·28, Omerkhadi 38·57, Chuckla 38·26, Fort (South) 3·79, Mahaluxmi 13·16, Sion 15·81, Chowpati 15·72, Worli 16, Esplanade 17·38, Walkeshwar 17·85. The Health Officer states that the causes affecting the mortality among the poorer classes may generally be stated to be overcrowding, imperfect ventilation of rooms and imperfect drainage of houses. As the greatest number of cholera cases are found on ground floors, so it is with sickness and mortality generally. The death causes from which the mortality of Kamathipura is in excess, are diseases of the respiratory system and measles. Much has been done for the drainage of this district, but Parel, Byculla, Second Nagpada, Walkeshwar, Colaba and the rest of the suburbs all suffer severely from the absolute want of drainage. The mortality from fevers, small-pox, measles and dysentery

was higher in Parel than in any other district, but the Health Officer is hopeful that the sanitation of the locality will be improved when channels for the removal of liquid refuse are constructed, and he remarks that the sewer from Parel village to the main sewer, at a point near the Gas Works, now in course of construction, should effect a great improvement. The returns of mortality according to the source of water supply, show that of 16 persons attacked with cholera, who drank well water, 15 died (93·7 per cent.), whilst among 196 others, who were consumers of Vehar and Tulsi water, only 138 deaths occurred (70·4 per cent). From cholera 164 deaths were registered being 62 more than in the previous year and 82 less than the average; altogether there were 229 cases, and 164 of these ended fatally, a mortality of 71·6 per cent. This included 18 deaths of Europeans, all of whom were serving on board H. M. Ships *Marathon* and *Redbreast*, and the Health Department reported that as far as could be ascertained, the whole of these cases had their origin outside Bombay, a statement that is strongly supported by the fact that during the period in which the 18 deaths occurred on board ship, there were only 6 cases among the whole of the shore population of the Island.

The dead during the year were disposed of as follows :—16,025 buried, 8,040 burned, and 1,176 taken to the Towers of Silence.

23. *Birth Registration.*—The Standing Committee also regret to find that, notwithstanding the efforts which have been made to ensure a more complete registration of Births, only 15,518 (exclusive of still-born) were accounted for, or 18·88 per 1,000 of population. Of these, 7,964 were males and 7,554 females. The highest rates of registered births were among Negro-Africans 41·09, low-caste Hindus 31·72, Jews 28·48, Parsis 28·31, Eurasians 23·78, Mussalmans 21·83. The lowest records of births were : Brahmins 7·97, Budhists 5·26.

24. *Work of the Health Department and cost thereof.*—On an average, 4,251 men and women, 907 scavengering and drain carts, and 198 night-soil and cesspool carts were at work each day ; and 850 tons of garbage and 390 tons of night-soil were collected and removed daily. 191 miles of drains were opened and cleaned during the year. The

total expenditure on the department was Rs. 11,43,961-2-2, but as its earnings were Rs. 6,72,996-3-7, the net cost to the Municipality was only Rs. 4,70,964-14-7 as against Rs. 5,20,639-5-4 in 1890.

25. *Leprosy.*—One of the special features in the report under review, is the very full and interesting account of the steps taken to establish a Leper Asylum in Bombay and to remove lepers from the public streets, which, originating with the humane efforts made in 1883 by Dr. Meurin, the Roman Catholic Bishop, for founding a home at Trombay, resulted some years afterwards in Sir Dinshaw Maneckjee Petit's placing Rs. 1,00,000 at the disposal of Government for the erection of a home on certain conditions, one of which was that it should be equipped and maintained by those who were responsible by law for such charges. But although the foundation-stone of the new building was laid on the 25th March 1890 by the late lamented prince, H. R. H. Prince Albert Edward Victor of Wales, many difficulties stood in the way, and even as yet the foundation-stone has not been added to. Mr. Acworth determined, however, to ascertain whether, without waiting for further action from any official body, it would not be possible to effect the desired object of providing a suitable, if temporary, home for the reception of lepers. Fortunately, he was able to prove that the requisite legal authority was actually in existence, little as this had been supposed to be the case. In July following an influential meeting was held at the residence of Sir Dinshaw, and a Committee, of which that worthy Baronet was appointed President, was formed for the purpose of collecting subscriptions and administering the same for the benefit of the unfortunate outcastes. The work of building an asylum on Municipal ground at Matunga was commenced on 19th August of the same year and on the 6th November following the first patients were housed in the new asylum. There is accommodation in the asylum for 270 patients in the fair season, and 250 during the rains, but on 9th May last there were 279 inmates, and one or two applicants for admission had to be turned away daily. The cost of maintenance, Rs. 10 per head per mensem, is high, but Mr. Acworth, while admitting this, says he has felt it to be his duty to accord every comfort and luxury within his means to the unfortunates, who having committed no crime, are yet prisoners for life or till cured, which is unhappily the same thing.

26. The Standing Committee, in touching on this portion of the Report, feel much pleasure in directing attention to the obligation which the public of Bombay are under to Mr. Acworth, for it is due to his courageous advocacy of the question, his undaunted perseverance, and the administrative ability with which he solved this difficult problem, that at this moment, the public highways and bye-ways are relieved from the dreadful exhibition of the lepers' miseries, and that a comfortable asylum has been provided for these most wretched of outcastes. As Mr. Acworth forcibly remarks, the single fact that whereas two years ago the presence of lepers in the streets was universal, an ever-present spectacle of horror, and as most people believe, an ever-present danger to the citizens, not one is now seen, or if he does show himself he is immediately removed to Matunga, is sufficient evidence of the value of the asylum. The report of the Leprosy Commission has not yet been received, but it is believed that it points to the institution at Matunga as an instance and example of the method in which leprosy ought to be dealt with in India. If this be true, the combined public charity of Bombay and the abilities of those who initiated the scheme, have solved a problem which no Government and no official body in India has hitherto been able to cope with.

27. *Markets.*—The supplies of fruit and vegetables were plentiful, good and cheap. Mutton and beef were fairly good, but the supply of fish was poor.

28. *Joint Schools Committee.*—The receipts under the head of Primary Education amounted to Rs. 1,14,621-12-5 and the expenditure to Rs. 95,520-10-2. Of Marathi primary schools there were 29 for boys and 4 for girls ; of Guzerati ditto, 18 for boys, 7 for girls, and 5 other primary schools, with a total attendance of 6,112 scholars. Provision for the accommodation of 700 pupils will be made over the new fruit and vegetable markets in Bhuleshwar.

Report of the Municipal Auditors.

29. The Municipal Auditors report that they examined the whole of the vouchers and papers relating to the receipts and disbursements and compared the day books with ledgers, bank receipts for deposits investments, as well as all the sinking funds investments, together with the bank pass books, and that the same were correct and in order.

The Auditors also certify to the correctness of the accounts of the Joint School Committee, which, under No. 15 of the Committee's By-laws, have to be scrutinised by the Auditors.

The details of income and expenditure are given in the usual manner, and will be found useful in explanation of many of the items.

In accordance with the terms of section 124 (3) of the Municipal Act, the Standing Committee direct that all the appendices attached to the reports of the several heads of departments, as received from the Commissioner, be circulated with his report for the information of the Corporation.

The foregoing "Review" is circulated to Municipal Councillors as directed by section 124 (3) *of the Municipal Act III of* 1888.

COWASJEE HORMUSJEE,
Chairman of the Standing Committee.

28th September 1892.

Proposed by Grattan Geary, Esq., seconded by Bhalchandra K. Bhatwadekar, Esq.—

No. 6740. "That the Review of the Administration Report of the Municipal Commissioner for the year 1891-92 be approved, and, together with the report and the appendices thereto, and the report of the Municipal Auditors, be passed on to the Corporation.

"That, under the provision of section 124 (3) of the Municipal Act, the Committee approve of copies of these reports being sold from year to year to any person requiring the same on payment of Rs. 5 per copy as hitherto."

Carried.

The consideration of memorandum No. 13878, dated 23rd instant, from the Commissioner, forwarding return of houses which fell down last month was postponed till next week.

No. 6741. *Resolved* : "That letter No. 13852, dated 22nd instant, from the Commissioner, reporting on the recent burst in the Tulsi 24" and Vehar 32" mains and forwarding report from the Deputy Executive Engineer, Water Works, thereon be printed and brought on for consideration at the next meeting."

Resolved: "That memorandum No. 13638, dated 20th instant, from the Commissioner, reporting that there was no case of burst on the Tansa Line during the week ending 17th idem, be *recorded*."

No. 6742.

Considered letter No. 14037, dated 24th instant, from the Commissioner, to the Secretary, as under :—

Sir,—I have the honour to forward for the information of the Standing Committee copy of a letter No. 2123 of the 23rd instant, from the Chief Accountant, and request the favour of sanction of the Standing Committee to the proposals made in his 4th or 5th para.—I have, &c., H. A. ACWORTH, Commissioner.

Letter No. 2123, dated 23rd instant, from the Chief Accountant, to the Commissioner, as under :—

SIR,—In continuation of this office No. 2006, dated the 12th instant, I have the honour to report, for the information of the Standing Committee with reference to their Resolution No. 2969 of 29th June 1892, that a further lot of 4 per cent. Government Paper for Rs. (80,000) eighty thousand only, belonging to the Surplus Cash Deposit Account was sold on the 20th instant at 104½ per cent. against the cost price noted in the margin.

Paper (at 100$\frac{3}{16}$) for	Rs. 55,000
Paper (at 99$\frac{3}{16}$) for	„ 25,000
	Rs. 80,000

2. This sale, together with those previously reported in this office Nos. 1251, 1509 and 2006, dated 4th and 25th July and 12th September 1892, respectively, makes up the maximum sum of rupees five lakhs fixed for such sales in the Standing Committee's Resolution No. 2969 quoted above.

3. It will be observed that, although the Standing Committee's sanction was accorded so far back as 29th June last, the Securities were not sold until funds were actually required by us from time to time and until favourable rates were obtained.

4. May I now request the favour of your obtaining the Committee's sanction to further sales not exceeding Rupees five lakhs to meet our requirements for expenditure on loan works, &c.

5. To avoid the trouble of frequently according such sanctions, perhaps the Standing Committee might feel inclined to authorize the sale from time to time, limiting the sale of paper on a single occasion to a sum not exceeding 2 lakhs ; provided every such sale be reported within 7 days from the dates on which it is effected as required by their Resolution No. 2969 referred to above.—I have, &c.,

SORABJI NAVROJI COOPER,
Chief Accountant.

Resolved : "That letter No. 14037, dated 24th instant, from the Commissioner, reporting the sale of a further lot of 4 per cent. Government paper (Rs. 80,000) at 104½ per cent. be *recorded.*

No. 6743.

"That sanction be given to the sale from time to time of further Government Securities, not exceeding Rs. 5,00,000 in all, in which balances of some of the Municipal loan funds have been invested to allow of the replacing of advances already made from surplus cash balance or other loan funds on account of loan works in progress, or of meeting further expenditure on account of such works during the course of the year.

"That each transaction of the kind be reported to the Committee within seven days."

Resolved: "That the following be *recorded* :—Memorandum No. 13639, dated 20th instant, from the Commissioner, reporting, with reference to the resolution of the Committee No. 4484, dated 3rd October 1888, the transfer of Rs. 1,00,000—(1) of Rs. 50,000, from the Surplus Cash Deposit account to the Municipal General Fund pass-book on 12th instant ; and (2) of Rs. 50,000, from ditto to ditto on 13th idem.*

No. 6744.

The following statement † was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 25th September 1892.

It was decided that the following should be forwarded direct to the Corporation : Letter No. 14155, dated 26th instant, from the Commissioner, to the Secretary, recommending the Corporation to contribute Rs. 500 towards the prize funds of the Bombay Art Society.

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* The Chief Accountant reports that the balance standing to the credit of the above deposit account after effecting the transfers amounts to Rs. 22,83,375-14-4 :—

In cash ... ...Rs.	5,069	5	4
In 5 per cent. Municipal Debentures for Rs. 17,66,500= „	17,66,500	0	0
In 4 per cent. Government paper for „ 5,13,000= „	5,11,806	9	0
Rs.	22,83,375	14	4

† *See* Appendix **B.**

BOMBAY, *5th October* 1892.

AT the Meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON; H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 28th ultimo were signed.

No. 7077. The seal of the Corporation was affixed to deed of agreement between Yeshwadabai, widow of Govind Gangadher Phadke, and the Corporation, securing to the Corporation the right to acquire, after the expiration of ten years from the date of this indenture, the set-back of property situate at No. 203, Grant Road, without payment of any compensation in respect of any structure standing within the regular line of the street, and at the rate of Rs. 28 per square yard for any land shown on the plans scored red to be there taken up, inclusive of any structure standing thereon, and of any loss, damage or expense sustained by her by reason of such acquisition.

Proposed by the Hon'ble Mr. Fazalbhoy Visram, seconded by Colonel Wilson—

No. 7078. "That with reference to the resolution of the Committee No. 5493, dated 24th August last, and as applied for by the Commissioner, in his letter to the Secretary No. 14285, dated 28th ultimo, sanction be now given to the variation of the contract with Messrs. Killick, Nixon & Co. so as to allow them the option of supplying 500 tons of other coal than Brymbo Hartley, consequent on the scarcity of tonnage to Bombay; any other such coal to be of similar description and value as that of Brymbo Hartley coal and subject to the approval of the Executive Engineer. That in the event of the contractors being able to supply Davison's West Hartley coal, the same to be paid for at the rate of Rs. 17-12-0 per ton instead of Rs. 16-12-0 per ton."

Carried.

No. 7079. The seal of the Corporation was affixed to deed of contract with Messrs. Killick, Nixon & Co. for the supply of 500 tons screened coal as above.

No. 7080. The seal was also affixed to deed of contract with the Garlick Indian Patent Stone Company for the work of paving certain footpaths with Indian patent stone.

The seal was also affixed (1) to 2 attested duplicate debentures of the Sanitary Works Loan of 1885, Nos. 306 N. N. and 1301 N. N., of Rs. 500 each; and (2) to 1 New Sanitary Works Loan of 1885, Nos. 3265/74 N. N., of Rs. 5,000.

No. 7081. *Resolved*: "That, as applied for by the Commissioner, in his memoranda No. 14296, dated 28th ultimo, Nos. 14506 and 14507, dated 30th idem, and Nos. 14609 and 14610, dated 3rd instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Govind Vishnu	Building at Gilder Street.
„ Hargowandas Khooshalbhai for Mr. Sorabji Manekji Damanwalla	Do. at Suparibag Road.
„ Govind Dadaji	Do. at Parel Village.
The Manager, Presidency Mills ...	Do. at Fergusson Road.
Mr. Khursetji Jamsetji	Do. at Mahim Bazar Road."

No. 7082. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 14856, dated this day, sanction be given to the cutting off of water-connections as per list submitted therewith."

No. 7083. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 14408 of 1892-93, sanction be given to the transfer of Rs. 217, from savings in the Budget grant for the Health Department, Conservancy, X, Halalkhor Branch, E, Repairs, to IV, Repairs, Conservancy Branch, to meet the cost of repairing the boundary wall of the Arthur Road Hospital."

No. 7084. *Resolved* : " That with reference to letter from the Commissioner to the Secretary, No. 14579, dated 30th ultimo, the Standing Committee

approve, under section 19 (6) of the Minicipal Act, of the fee of Re. 1-0-0 fixed by the Commissioner as the price of the preliminary Election Roll."

No. 7085. *Resolved* : " That, as applied for by the Commissioner in letter No. 14592, dated 30th ultimo, sanction be given to his purchasing from Messrs. Heptula Sheik Adam & Co. 2,000 cases of kerosine oil, 150° proof test, at Rs. 3-12-0 per case, to be delivered free at the Bellasis Bridge Depôt. The cost to be paid out of the current year's Budget provision for kerosine oil lighting.

"That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary as this rate is lower than the present contract rate."

No. 7086. *Resolved :* " That the following be *recorded* :—Letter No. 14651, dated 3rd instant, from the Commissioner, reporting that he has allowed one Gangaram Buchur to occupy for one month only, and on payment of Rs. 20, a piece of Municipal ground, 20′ × 20′ or thereabout, on Mint Road for the purpose of selling sweetmeats thereat."

No. 7087. *Resolved* : " That letter No. 14563, dated 30th ultimo, from the Commissioner, be printed and brought on for consideration this day fortnight."

In accordance with notice it was proposed by A. G. Viegas, Esq.—

No. 7088. " That the attention of the Municipal Commissioner be drawn to the most unsatisfactory condition of the foot-paths of the following streets and roads on the Port Trust Estate, Mandvi Ward—(1) Musjid Bridge Street (south), (2) Baroda Street, (3) Broach Street, (4) Surat Street, (5) Argyle Road—and to the necessity of paving them out of the available grant for the current year for paving foot-paths."

The motion was seconded by Abdalla M. Dharamsi, Esq., and *carried.*

No. 7089. *Resolved* : "That memorandum No. 13878, dated 23rd ultimo, from the Commissioner, forwarding a statement of houses, or portions of houses, which fell during the month of August 1892, as under, be *recorded.*"

STATEMENT of Houses or Portions of Houses which fell during the month of August 1892.

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties.		Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	REMARKS.
										Persons injured.	Persons killed.				
							1892.					Rs.			
1	B.	7-15	Memanwada Road.	Samsoodin Bundoomeya,	Chal ...	Not known	21st Aug.	Decayed condition of the posts imbedded in the wall.	Four compartments of the south wall.	*Nil.*	*Nil.*	100	*Nil.*	*Nil.*	
2	„	„	Norowji Hill...	Jalbhai Ardasher Sett.	Compound wall.	Do. ...	27th „	Slip of land on account of heavy rain.	Compound wall.	„	„	100	„	„	
3	C.	8-10	Bhuleshwar ...	Shivram Khushalchund.	House ...	Do. ...	7th „	Heavy rain ...	Portion of side wall.	„	„	100	„	„	
4	„	80-2	Do. ...	Bhugwandas Guru Dharamdas.	Do. with temple.	Do. ...	18th „	Do. ...	South portion.	„	„	400	„	„	
5	D.	12	Borbhat Lane.	Jewraj Bolloo ...	West main wall.	Do. ...	19th „	Heavy rain and wind.	West portion of the wall	„	„	200	„	„	
6	E.	„	Byculla, Agripada.	Chandroo Dama Agry.	Gallery wall.	Do. ...	30th „	Heavy rain ...	Wall ...	2	„	3	„	„	
7	„	...	Matharpakadi.	Dadabhoy Dossabhoy.	Shed ...	Do. ...	30th „	Do. ...	Whole shed..	*Nil.*	„	200	„	„	
8	„	106-110	Temker Street	Emnabai, widow of Haji Ahmed Mussa.	House ...	Do. ...	19th „	Do. ...	Portion of north wall.	„	„	20	„	„	
9	F.	1364	Parel Village...	Isuf Bapu and Abdalla Bapu.	Do. ...	22 yeats ...	29th „	Walls being of rubble built in mud only, and posts not properly bedded, not able to withstand the heavy rains.	Walls ...	„	„	300	„	„	
10	G	...	Lady Jamsetjee Road.	Doomin Souza ...	Do. ...	10 years ..	8th „	Woodwork rotten; mud walls	East side wall.	„	„	20	„	„	
11	„	...	Do. ...	Shantaram Narayen.	Do. ...	40 „ ...	31st „	Do. ...	House ...	„	„	25	„	„	
12	„	...	Mahim Bazaar Cross Road.	Sumboor Sindoor...	Do. ...	10 „ ...	31st „	Do. and jaoli roof ...	North side wall.	„	„	10	„	„	
13	„	...	Lady Jamsetjee Road.	Motabhoy Sunderji	Do. ...	30 „ ...	31st „	Do. ...	Portion of south side roof.	„	„	20	„	„	

Considered the following :—

No. 13852 OF 1892-93.

BOMBAY, 22*nd September* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—I have the honour to submit a report from the Deputy Executive Engineer, Water Works, on the recent bursts in the Tulsi 24″ and Vehar 32″ mains. The facts are stated in sufficient detail by Mr. White. I am not aware whether in former experience, there is any case of the simultaneous interruption of supply from two of the principal carrying mains from the lakes to the city. Had there been at the same time a burst on the Tansa main, the consequences would have been most serious. The inconvenience from the interruption on the Tulsi main would have been much less important if the proposed 32″ main from Chinchpoogly to Grant Road had been in existence as the Arthur Road 27″ main could have been utilized for Tulsi water, and the former for water from Tansa. As it was, there was no alternative main of large size into which the Tulsi water could be sent, the 27″ main being charged from Tansa. In the same way the evils of the interruption to Bhandarwada would have been minimized, if the proposed new mains along Kala Chowki and Ghorupdeo Road had been in existence. I attribute the absence of serious complaint of short supply partly to the state of the weather and partly to the fact that steps were at once taken by advertisement to apprize the public of what had occurred.

2. The work of carrying out the diversion of the Tulsi main was undertaken under my personal orders under section 64 (3) (*c*) of the Act. My reasons for doing so are set forth in Mr. White's report. The character of the subsidence at Gibbs Road rendered it quite unsafe to rely on the chance of being able by any temporary expedient to continue the supply through the 24″ main and a diversion was rendered necessary by the circumstances of the case. The cost of the diversion will, I believe, be about Rs. 5,000, but I will submit exact figures as soon as possible. I must here express once more my deep obligations to the Secretary and members of the Parsee Punchayet whose ready and public-spirited acquiescence in my request to encroach upon their property for the purposes of the diversion has reduced the inconvenience to the city from the interruption of the Tulsi supply, to the lowest possible point and relieved me of great anxiety.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 3183W OF 1892-93.

BOMBAY, 21*st September* 1892.

TO THE MUNICIPAL COMMISSIONER.

SIR,—I have the honour to report on the interruption to the water supply to the Malabar Hill Reservoir caused by the subsidence

on Gibbs Road. Reference is also made to the burst which occurred on the 9th instant on the Vehar 32″ main which supplies Bhandarwada Reservoir, separately reported under this office No. 3182 of this day, the mains supplying the two reservoirs, both having been interrupted at the same time. In the following, the city is intended to cover the whole island of Bombay and the supplies to Bandora and Kurla, &c., outside the island of Bombay.

2. The 24″ main from Tulsi, which supplies the Malabar Hill Reservoir, is laid along Gibbs Road. A 9″ main leading down from the reservoir also being laid along the same road, the 9″ main supplying parts of Cumballa Hill.

3. In the evening on the 1st instant, a crack was noticed on the surface of the road opposite the Parsee Towers of Silence, between the viaduct and the entrance gate to the grounds of the Towers where the road is carried on embankment. The road was closed to traffic and the water passing through the mains shut off; that these precautions were well advised was shown the next morning when it was seen that the down-hill side of the road had subsided for a length of about 300 feet and vertically to a greatest depth of about 6 feet, the mains being carried down with the road surface.

4. As it was evident that the interruption of the supply to the reservoir was likely to be of some days' duration, the supply from the reservoir to the lower parts of the city supplied by it was shut off in order to conserve the water stored for the supply to Malabar Hill; the supply to the lower parts of the city supplied from the reservoir being taken up by Tansa. The reservoir being nearly full when the accident occurred, there was no anxiety as to the water on this curtailed supply not holding out until connection with Tulsi lake was restored, either temporarily or otherwise.

5. Rain was continuous before and after the accident, as may be seen from the table in margin. On the morning after the subsidence it was proposed to lay a diversion to the Tulsi 24″ main through the grounds of the Parsee Towers of Silence, and permission to do so was obtained from the Punchayet by the Commissioner the same day. The practicability of lifting and temporarily securing the Tulsi main was also considered. But this was given up for the time, at any rate, for the following reasons. The subsidence of the road continued. The breast-wall and the ground below it on the down-hill side of the road continued to give way. Heavy rain continued with consequent probability of the subsidence becoming still more serious, and, lastly, a diversion to the 24″ main would most probably facilitate matters during the reconstruction of the road. On the second morning after the accident it was decided to at once proceed with the laying of the diversion main as at first proposed.

1892—BYCULLA.

25th August	..	0	inches.	0	cents.
26th "	..	3	"	25	"
27th "	..	5	"	67	"
28th "	..	1	"	64	"
29th "	..	5	"	52	"
30th "	..	1	"	70	"
31st "	..	6	"	28	"
1st September	..	6	"	32	"
2nd "	..	5	"	08	"
3rd "	..	3	"	51	"
4th "	..	1	"	27	"
		40	inches.	24	cents.

In the meantime pipes, sluices and connections, &c., had been looked up, and the work of laying the diversion was proceeded with day and night until the 11th instant, when water from Tulsi was passed in to the Malabar Hill Reservoir by the diversion main.

6. In order to avoid any possible further mishap, the diversion main was started from a point where the road is on the natural ground and not on embankment. It was then carried round through the grounds of the Parsee Towers of Silence under the paved passage leading up to the Towers across the nalla where the Gibbs road viaduct is situated, by means of wooden trestle bridge, and on up by a cutting, to rejoin the 24″ main above the viaduct, the trestle bridge being constructed and the cutting taken out for the purpose.

7. The only pipes with connections and sluices, &c., available for the diversion were pipes of 18″ and 16″ diameter ; the total length of the diversion is 1,014 feet, the greater portion being laid with 18″ diameter pipes. The reduced diameter of the pipes for this length requires a higher pressure in the main by a few pounds per square inch only to give the same discharge as without the reduction ; and as the additional head may in a sense be considered as available for 3 or 4 months owing to Tulsi being now full and overflowing, it was considered that these pipes would answer sufficiently well for the temporary purpose for which they were required ; at the same time the 9″ main leading down the Gibbs Road from the reservoir has been connected with the 24″ Tulsi main below, or before, the diversion, so that the pressure is relieved to the extent of the draw-off by this main. Sluices have been put in at each end of the diversion in such a manner that, should it be found practicable within a short time to temporarily restore the 24″ Tulsi main, and should it be considered advisable to do so before the permanent restoration of the road, water could be passed direct through the 24″ as before, the diversion main being allowed to remain as a stand-by until the permanent restoration of the road.

8. Before the break on the Tulsi main was temporarily restored by the diversion, a burst unfortunately occurred on the 32″ Vehar main, which supplies the Bhandarwada Reservoir between Matunga and Dadur. The burst occurred on the 9th instant, and as the main is under water at this time of year where the burst took place, it was not until the 12th instant that the break was repaired and the main recharged, although work at the break was carried on night and day. This burst is reported separately under this office No. 3182 of this day. There were thus interruptions at the same time to two of the principal mains supplying the city, and these also the mains supplying the reservoirs.

9. The supply to the city was as follows until the connections were restored and the reservoirs again full :—

(*a*) From the night of the 1st to the 11th of the month the supply from Tulsi to Malabar Hill Reservoir was cut off. (*b*) Malabar

Hill was supplied throughout the interruption from the Malabar Hill Reservoir, the water stored becoming thereby daily reduced. (*c*) From the 2nd to the 7th the higher parts of Cumballa Hill were supplied by water carts. (*d*) Cumballa Hill was supplied with Tulsi water from the 7th after the 9″ main had been connected temporarily with the Tulsi 24″ on Gibbs Road and a sluice placed on the 24″ Tulsi main at the commencement of the diversion at the lower end. (*e*) From the 9th to the 12th the supply by the 32″ Vehar main to Bhandarwada was cut off, and during this time the water stored in the reservoir was considerably reduced. (*f*) The supply by the 24″ Vehar main and the supply from Tansa continued to come in without interruption. (*g*) From the 2nd to the 7th the whole city, except Malabar Hill, was supplied by the Vehar 32″ and 24″ mains and the Tansa 48″ main. (*h*) From the 7th to the 9th the whole city, except Malabar and Cumballa Hills, was supplied by the same mains as in the last para. (*g*) above. (*i*) From the 9th to the 12th the whole city, except Malabar and Cumballa Hills, was supplied by the Vehar 24″ and the Tansa 48″ mains only. (*j*) From the 12th to the 17th, on which latter date Malabar Hill Reservoir was again full, water was let down to the lower parts of the city supplied by this reservoir for a few hours daily to increase the pressure at the times of greatest consumption ; this limited supply being given only to allow the reservoir to again fill up. (*k*) With the distribution mains as at present the pressure in parts of the city was much reduced, and for some hours, at various times from the 9th to the 12th, the supply to the Nowroji Hill, Mandvi and Mazagon districts had to be somewhat reduced, and this although there was never less than about 22 million gallons per day being delivered into the city from Vehar and Tansa. From the 17th after the Malabar Hill and Bhandarwada Reservoirs were again full, the supply to the city was resumed as before the interruptions to the mains occurred.

10. During the interruptions, and until they were again full, the water in the Malabar Hill and Bhandarwada Reservoirs was as follows :—

Malabar Hill Reservoir.

When this reservoir is full, the depth of water is 20 ft. in the settling basin and 17′ 9″ in the distributing basin. When the break on Gibbs Road occurred on the 1st instant, there was (in the evening) 20 ft. in the settling basin and 15′ 6″ in the distributing basin. On the 11th, before water from Tulsi was again flowing into the reservoir, the depth in the settling basin was 11′ 4″ and in the distributing basin 13′ 10¾″. On the 17th the reservoir was again full.

Bhandarwada Reservoir.

The distributing basin of this reservoir being empty for repairs there was water only in the settling basin when the breaks to the mains occurred, the depth of water in the settling basin when full being 30 feet.

2. When the interruption to the Tulsi 24″ main occurred at Gibbs Road on the 1st (in the evening), the depth of water in the settling basin was 25′ 4″. When the burst occurred on the 9th on the 32″ Vehar main, which supplies this reservoir, the depth in the settling basin was 15′ 2″. On the 12th before water was again flowing in from Vehar, the depth in the settling basin was 11′ 4″, and the settling basin was full again on the 17th instant.

3. It will thus be seen that the store of water was considerably reduced. Bhandarwada would, however, have been better off had the further connections at Chinchpokli, which are now under order, been completed.

11. Had the further connections at Chinchpokli referred to in the last para. above been completed, and had additionall arge mains been available for the better distribution of the water after it reaches the city, the supplies from Vehar and Tansa during the interruptions could have been distributed to greater advantage, and the supply from Tulsi could have been sent direct into the city, and thereby helped to maintain better pressure in the mains at the times of maximum consumption. But as it was, the Tulsi supply, except a small quantity for a few days for Cumballa Hill, could not be made available from the night of the 1st to the 11th instant, *i.e.*, for 10 days. The want of additional large mains for the better distribution of the water after it reaches the city by the different supply mains is shown in a case like the present when interruptions taking some days to repair occurred together on the two mains supplying the reservoirs of the city. The advisability of the proposed large main from Vehar is also shown ; as, had there been an interruption at the same time on the Tansa duct, the city would have been on a very short supply of water.

12. As little damage as possible was done in the grounds of the Towers of Silence, and the work of laying the diversion main was carried through without any complaint from the Punchayet.

13. The cost of the diversion main will probably amount to about Rs. 5,000, exclusive of the value of pipes and sluices, &c., which will be returned into stock upon the diversion being taken up. Proposals for meeting the charge will follow with the details of the cost of the work.

14. I may mention that all assistance required from the Road Department was given with readiness throughout. Mr. Chaves, the Acting Superintendent, Water Works Maintenance Branch, arranged for his work in a satisfactory manner, and both he and his subordinates carried out their work with the expedition required ; the burst on the 32″ Vehar main occurring at the same time as the subsidence on Gibbs Road throwing a good deal of work on the department. I also availed myself of the assistance of Mr. N. D. Bhada from the Tansa Department. Mr. Hewett, Chief Inspector, Water Works, gave every attention to the regulation and distribution of the water-supply to the city, during the

interruptions, to the best advantage admitted by the present system of distribution mains. The head surveyor, Mr. N. H. Katrak, was engaged on the work throughout.

15. Very few complaints of shortness of water were received.—I have, &c.,

T. C. H. WHITE,
Acting Deputy Executive Engineer
in charge Water Works.

No. 7090. *Resolved* : "That the following be forwarded for the information of the Corporation under the terms of section 64 (*c*) of the Municipal Act. Letter No. 13852, dated 22nd ultimo, from the Commissioner, reporting on the recent bursts in the Tulsi 24″ and Vehar 32″ main, and forwarding report from the Deputy Executive Engineer, Water Works, thereon."

No. 7091. *Resolved* : "That the following be *recorded* :—Memorandum No. 14181, dated 27th ultimo, from the Commissioner, reporting that there was no case of burst on the Tansa Line during the week ending 24th idem."

Read letter, dated 28th ultimo, from Mr. C. B. D'Abreo, complaining that the private market at Agar, Dadar, is ill lighted, badly ventilated and in a dangerous condition ; also complaining of the bad quality of mutton that is sold in this market.

Proposed by A. G. Viegas, Esq., seconded by Colonel Wilson—

No. 7092. "That letter, dated 28th ultimo, from Mr. C. B. D'Abreo, on the subject of the condition of the Agar Market at Dadar be forwarded to the Commissioner for disposal and that the applicant be informed accordingly."

Carried.

No. 7093. *Resolved* : "That the following be forwarded to the Commissioner for disposal and that the applicant be informed accordingly. Letter, dated 3rd instant, from Mr. A. J. D'Silva, on the subject of the demolition by the Municipality of his shed situate at Sion."

No. 7094. *Resolved* : "That the following be forwarded to the Commissioner for disposal, and that the applicant be informed accordingly. Letter, dated 28th ultimo, from Mr. Nana Bhawoo, on the subject of the drainage of his property situate in New Line Street, opposite Lohar Chawl."

Resolved: "That the following be *recorded*:—Memorandum No. 14279, dated 28th ultimo, from the Commissioner, reporting, with reference to the resolution of the Committee No. 4484, dated 3rd October 1888, the transfer of Rs. 50,000 from the surplus cash deposit account to the Municipal General Fund pass-book on 24th ultimo.*

No. 7095.

Considered the following:—

No. 2556 OF 1892.

GENERAL DEPARTMENT,
BOMBAY CASTLE, 25*th July* 1892.

To JAVERILAL UMIASHANKAR YAJNIK, Esq., J.P.,
President of the Municipal Corporation of the ... City of Bombay.

SIR,—I am directed to forward herewith extract paragraphs 7 and 8 of a letter from the Accountant General, No. $\frac{Q.A.}{656}$, dated 11th April last, containing some remarks by that officer on the account system of the Bombay Municipality as disclosed in the Administration Report of the Municipal Commissioner for the year 1890-91, and to observe that it appears to Government that Mr. Cox's recommendations might with advantage be adopted by the Municipality.—I have, &c.,

W. L. HARVEY,
Under-Secretary to Government.

Extract paragraphs 7 and 8 of the Accountant General's letter No. $\frac{Q.A.}{656}$, *dated 11th April* 1892.

7. The accounts, as published in the Administration Report, seem to me so voluminous as to be of comparatively little use, and if my advice were asked, I should certainly suggest that they should be condensed by the adoption of a tabular form and by classifying the Revenue and Expenditure under suitable major, minor and detail heads. There are several items in these published accounts which I find myself at present unable to understand. To begin with the words "including transfers" in the heading needs explanation, and I note below other items which a somewhat casual scrutiny by my outside Audit Department of the accounts has shown to be open to question.

The entries as profit on account of Building Certificate forms, Repair Certificate forms are probably the sale proceeds of the forms. The *profit* would be the difference between the cost and the proceeds.

Page 118.

* The Chief Accountant reports that the balance standing to the credit of the above deposit account after effecting the transfer amounts to Rs. 22,37,126-1-2—

In cash ... ...Rs.		38,925	12 2
In 5 per cent. Municipal Debentures for Rs.	17,66,500= „	17,66,500	0 0
In 4 per cent. Government paper for... „	4,33,000= „	4,31,700	5 0
	Rs.	22,37,126	1 2

Interest and profit on Loan and Reserve Fund investments. Is it correct to regard these items as profit? I understand that the amount shown as "total interest received" is the 2 per cent. on Current Account balances with the Bank and interest on Government paper. This amount should, I think, be taken to reduce the charge for interest at 4 and 5 per cent. paid by the Municipality on the unspent Loan Funds in deposit or invested in Government or other securities, the result in that case would probably show a loss.

Page 120 (see also page 46).
Page 46.

Nominal Profit on Stock adjusted Rs. 72,175-7-0. I do not understand what is meant by "Nominal Profit," unless it be the difference between the cost of stores and the amount at which charged to Departments and works when issued or used.

Page 120.

I find the Bank of Bombay credited and debited with the Cash Deposit Account of Rs. 25,12,390-2-8, but I cannot trace the other Cash Deposit accounts for Rs. 3,01,432-8-0. Then there are further Deposit accounts with the Bank of Bombay at pages 140 and 141. These may be the transactions as they passed through the accounts during the year, but the entries as they appear are unintelligible to me; besides I cannot find from this account the position of any Deposit or Investment account. The account opens and closes with a "cash balance," which must be considerably below the actual balances of funds with the Corporation. I cannot find it stated what the balances are, but I notice at page 140 that besides a large investment in Government paper, there was Rs. 12,60,791 in cash deposited with the Bank of Bombay.

Pages 132 and 133.

Opening balance Rs. 3,09,274-15-8.
Closing balance Rs. 3,03,157-11-7.

Some time ago the Municipality stated that the average balance of Loan Funds alone amounted to over 18 lakhs, whereas this account gives the impression that at the end of the year the Municipality had only Rs. 3,03,157.

See para. 4 of this office report No. 28894, dated 4th January 1892.

In statement No. 4, the net premium received on loans raised from the public is included in the Schedule of liabilities. These amounts are not repayable, they form items of profit, and should, therefore, be treated as assets, for the same reason the "Commission on private works is not a liability but an asset."

Pages 145-146.

8. The Act required the Auditors to submit a report upon the accounts, but the report submitted by them is, I think, needlessly lengthy, occupying 50 printed pages and conveying much information already furnished by the Commissioner's Report, the Financial Statements and the Departmental Reports. It should, in my opinion, be sufficient for the Auditors to certify that the Financial statements, published with the Administration Report, are correct, and that they have verified the balances of cash and Government securities belonging to or deposited with the Corporation, by an examination of the Bank Pass Books. Safe custody receipts and the cash and Government Promissory Notes in the office. Any irregularities observed in the course of audit should

also be brought to notice. If these points were attended to nothing more would be necessary. I do not find it clearly stated that any verification of balances was made by the Auditors at the close of the year—a most important portion of their duty.

No. 11619 OF 1892-93.

BOMBAY, *27th August* 1892.

TO THE MUNICIPAL SECRETARY.

MEMORANDUM.—

The Commissioner has the honour to forward to the Standing Committee a very full and careful memorandum by the Chief Accountant on the Accountant-General's comments embodied in the statement forwarded to the Corporation under Government letter No. 2556 of 25th ultimo.

The Accountant-General commences by criticising the Chief Accountant's Account Statement No. 3, which will be found at pages 111-143 of the last Administration Report. There is no doubt that it is an exceedingly full and minute one, but the fault, which is almost invariably found with accounts and statements prepared by the Chief Accountant and Commissioner in the Corporation and Standing Committee, is that they do not give enough information, not that they give too much. The several items of account comprised in the statement referred to are arranged under major, minor and detail heads ; as to the suitability of the classification, the Commissioner will say nothing, and they could no doubt be greatly condensed ; but the object of their excessive minuteness of detail is to convey as much information as possible primarily to members of the Corporation who are familiar with most of the causes of expenditure and sources of revenue, though they may not be readily intelligible to those who are not. The entry under Public Health Department Disbursements "VI.—New Live and Rolling Stock" (page 115), would, no doubt, be incomprehensible to many people, but the members of the Corporation are at once aware that it means more bullocks and carts. Whether the statement is too full or not is a question not of accounts but of administration.

Turning to the items specially criticized, the first has been sufficiently dealt with by the Chief Accountant. As regards the 2nd—"Interest and Profit on Loan and Reserve Fund Investments"—the Chief Accountant has explained the facts, and the Commissioner cannot think that the course suggested by the Accountant-General would be either as convenient or equally in accordance with law with that now adopted. The law requires that interest and profit arising out of investments made by the Corporation shall be credited to the Municipal Fund. And this is what is done. To credit either the one or the other, not to the Municipal Fund but to the interest charges on the particular loan from which it has accrued, would hardly be consonant with the letter of the law, while it would have the inconvenient consequence that an annual provision of interest and sinking fund on loans would become an uncertain factor, rising and falling with the probabilities, which cannot be accurately foreseen, of premia and interest. It may be added that in the Port Trust accounts, which are audited by the Accountant-General, interest and

profit on investments and loans are treated substantially in the same way as here, and in the accounts of both the Provincial and Imperial Governments, interest on loans is also credited to general revenues. (*Vide* Port Trust Administration Report for 1890-91, pages 18 and 20 ; *Government Gazette* for 25th instant, page 906.)

The remaining heads of criticism have been dealt with by the Chief Accountant as fully as I could deal with them, and I will therefore pass them by.

H. A. ACWORTH,
Commissioner.

MEMORANDUM. No. 1707 OF 1892-93.

BOMBAY, 17*th August* 1892.

FROM THE CHIEF ACCOUNTANT.

Before I proceed with my report on the remarks made by the Accountant-General, regarding certain items shown in the statement of Accounts of Receipts and Disbursements for 1890-91, I beg to give a brief *resumé* of the different systems of keeping accounts of this Municipality that have prevailed from 1865 to date.

2. The accounts for and prior to 1864 were reported by Surgeon-Major Pelly to be in a very unsatisfactory state, showing at the end of 1864, as stated by Mr. Crawford in his Annual Report for 1865, page 12, "upwards of nine lakhs of outstanding advances "made at different times since 1862 to numerous persons under "numerous headings."

3. Major (now Colonel) Thacker, the first Controller of Municipal Accounts, appointed under Act II of 1865, introduced an improved mode of book-keeping, and framed the accounts for 1864 and 1865 on the basis of the mercantile system, in which the income assessed for the year, whether collected or uncollected during the year, was shown as the actual income of the year in the Income* and Expenditure account, treating the uncollected balance as an outstanding recoverable, as shown in the Assets and Liabilities statement. The expenditure for the year, both paid and unpaid, was similarly shown in the Income and Expenditure statement as the actual expenditure of the year, showing the unpaid expenditure as a liability. These forms of accounts were approved and adopted by the then Bench of Justices whose thanks were tendered to Major Thacker as per their resolution, dated 18th July 1866.†

4. The same forms of accounts were continued up to 1868. In the accounts for 1869 certain modifications were adopted at the suggestion of the Committee appointed to consider and report on the system of checking and auditing the Municipal expenditure, of which Mr. Chapman, the then Accountant-General, was the President. On the suggestion of the Committee, the income actually collected during the year, including that for previous years, was shown in the Income and Expenditure account as the actual

* Generally called Profit and Loss Account.

† Proposed by A. R. Scoble, Esq., seconded by Dr. Birdwood, and *carried*—

"That the Bench, in acknowledging with cordial thanks Major Thacker's Statements "of Accounts for the years 1864 and 1865, desire to place upon record their high sense "of the great ability and zeal shown by him in the adjustment of the accounts of the "Municipality."

income of the year, showing outstanding rates and taxes in a separate statement, and the expenditure actually paid was, according to the Government system, shown in the above account as the expenditure of the year. The uncollected income and the unpaid expenditure were consequently not shown as our respective assets and liabilities in the Assets and Liabilities statement.

5. The Income and Expenditure and Assets and Liabilities accounts were consequently continued to be printed with the above modifications suggested by the said Committee until 1871, when Mr. T. C. (now Sir Theodore) Hope revised these forms of accounts and showed "the net receipts from all sources contrasted with the "estimates" in one statement, giving the expenditure in another and as the Income and Expenditure Account Statement then in vogue did "not show disbursements made in reduction of debt, &c., "&c., &c., and the discharge of debts transferred to personal heads "in the books, nor payments for stock, buildings, &c., treated "as assets, nor cash advances, &c.," he stated at page 12 of his report for 1871: "In order, however, that the whole of "the transactions of every description may be accessible to "those who care to look into them, I publish a new statement "(Appendix VI) showing them in detail much as is the "practice in the accounts of the Calcutta Municipality." The above Appendix VI, which opened with the actual cash balance in the Office and Bank Treasuries (current account) at the beginning of the year and ended with similar balance at the close of the year, was headed "Statement of Total Receipts and Disbursements (in-"cluding transfers) of the Bombay Municipality for the year end-"ing 31st December 1871." The words "(including transfers)" were, I presume, used with a view to prevent any one misunderstanding that all the items entered on the receipt and disbursement sides were actual cash transactions, as some of them included transfers from one head to another on account of adjustments of errors or of advances made to officers, to Stock Accounts, to Departmental and Private Works, &c., &c. The form of Day Book introduced in this office on the suggestion of Mr. Chapman's Committee, provides a transfer column, and the Committee in para. 32 of their report, dated 3rd August 1869, stated: "Transfer "entries or transactions requiring no cash to pass in adjustment "will, of course, be dealt with solely in the Account Department." The Income and Expenditure and the Assets and Liabilities Accounts, not including outstanding income and unpaid expenditure on the recommendation of Mr. Chapman's Committee, were allowed by Sir Theodore Hope to be published in the Annual Report for 1871, with the following notes:—

(1) On the Income and Expenditure Account, Appendix VIII.—"*N. B.*—This account is to be understood as showing neither "total income and expenditure nor cash transactions only, but the "state of the books. To the excess of expenditure over income "shown above (Rs. 1,28,746-6-11) should be added the unbooked "charges (*see* Appendix VII), amounting to Rs. 5,01,944-9-3, "which will give the true total of Rs. 6,30,691-0-2."

(2) On the Assets and Liabilities Statement, Appendix IX.—

"*N. B.*—This account is drawn up to tally with No. VIII, but "it does not exhibit the true position of the Municipal Fund, "as only a few buildings are entered and unbooked charges and "outstanding balances for recovery are omitted." In addition to the separate Annual Revenue and Expenditure Statements under the different major Budget heads referred to above, Sir Theodore Hope caused a monthly abstract of the Municipal accounts to be furnished to him under principal heads, clubbing together some of the major Budget heads of receipts and expenditure contrasting with the corresponding Budget allotments, showing total receipts and disbursements on account of advances and deposits and the actual opening and closing balances at the Office and Bank Treasuries (current account) similar to the accounts now published weekly under the provisions of section 135 of the Municipal Act (III of 1888).

6. Mr. (now Sir Charles) Ollivant, however, discontinued from 1883-84 the publishing of the Income and Expenditure Account altogether, and in lieu of the Assets and Liabilities Statement he published two separate schedules—one showing items of liabilities, including unbooked property, &c., and the other of assets.

7. The forms of accounts published in the Annual Report of 1871 with the omissions and additions made by Sir Charles Ollivant in 1883-84, were continued to be published in the Administration Reports up to the introduction of the Municipal Act III of 1888, section 123 of which lays down that "Accounts of the Receipts and "Expenditure of the Corporation shall be kept in such manner and "in such forms as the Standing Committee shall from time to time "prescribe."

Section 124 (1) of the Act further provides that "the Commis-"sioner shall, as soon as may be after each first day of April "have prepared a detailed report of the Municipal administration "of the City during the previous official year, together with a "statement showing the amounts of the receipts and disburse-"ments respectively credited and debited to the Municipal Fund "during the said year and the balance at the credit of the fund "at the close of the said year.

"(2). The Commissioner shall incorporate with his said report "and statement, (*a*) a report for the same period from each head "of a department subordinate to him; (*b*) the account of balances "due on loans then last published under section 105 and shall "cause the same to be printed.

"(3). After examination and review of the said printed report "and statement by the Standing Committee, there shall be added "to the compilation printed copies of such of the appendices "attached to the reports of the several heads of departments, if "any, as the Standing Committee direct. . . . ."

8. The present principal account forms,* partly introduced by Colonel Thacker and modified on the suggestions of Mr. Chapman's Committee, and partly by Sir Theodore Hope as finally revised by Sir Charles Ollivant, were approved by the Standing Committee under section 123, and have been continued until now.

* Statement (A)—Income (under major Budget heads, actuals contrasted with estimates).
Statement (C)—Expenditure (under major Budget heads, actuals contrasted with estimates).
Appendix No. 3—Cash Account or Statement of Total Receipts and Disbursements (starting with opening balance, giving income under major Budget heads, as well as the different years and minor heads thereof; expenditure under major and minor Budget heads; Loan works expenditure under every major and minor head; receipts and payments on account of debt, advances, deposits, investments, stock, &c., &c., ending with closing balance).
Appendix No. 4—Schedule of Liabilities.
" No. 5— " of Assets.

The other appendices † to the report have also been directed by the Committee to be printed in the forms adopted by them, they having directed the omission of the printing of the Dead Stock Return as per para. 14 ‡ of the Standing Committee's Review on the report for 1888-89, quoted in the margin.

† Appendices Nos. 1 A to L.—Interest and Sinking Fund, &c., Statements of various loans raised from the public.
Appendix No. 2—Town Duty Statement (Revenue and Refunds).

Appendices Nos. 6 and 7—Water Works (Income and Expenditure, and Liabilities and Assets).
Appendix No. 8—Garden Fund.

‡ "A Sub-Committee of the Standing Committee went "carefully into the question of the 'Appendices' with a view "to shortening them, and the Standing Committee have "decided to omit for the future a few unimportant 'state-"ments in the Executive Engineer's Report, as also the "'Dead Stock Return'. Accordingly, under the terms of section 124 (3) of the Act, the Standing Committee direct that the Appendices minus the Statements be appended to the compilation in the usual way."

9. Of course, the transactions of the Municipality being varied and multifarious, the accounts must necessarily and unavoidably be lengthy and elaborate, and it is sometimes difficult to understand certain items from the wording of the ledger head, which alone is generally given in the account statements, without special explanation.

10. With a view, however, to their being easily understood, the cause of almost every item of increase and decrease in receipts and expenditure over estimated amounts is explained in the body of my report on Statements A and C—Income and Expenditure—under major Budget heads. Explanation is also given in the Commissioner's Report on Income and Expenditure Statements in a more condensed form, while contrasting the same with the estimates and also the actuals of the preceding year. Detailed explanation is likewise given in my report on the different Appendices Nos. 1 to 8. Chapter III of the Commissioner's report, as also the Standing Committee's review deal with the salient features of the financial transactions of the year. From the remarks made on the casual scrutiny of Appendix No. 3 by the Accountant-General's Outside Audit Department, I am led to

believe that they are probably made without referring to the other account statements and the explanations given in my report and the Commissioner's report.

11. The detailed statements of receipts and disbursements annually submitted to Government in the forms from time to time prescribed by them, are prepared from Appendix No. 3, simply by clubbing certain items and sub-dividing others to suit the headings of the different columns of the former, and as Government experienced some difficulty in verifying the figures supplied to them with those given in our Appendix No. 3 owing to the classification of the heads in the Government form differing from the headings given in the published accounts of the Municipality, we commenced from 1887-88 giving a reference to the clubbed and subdivided heads and the pages from which they were extracted to facilitate their comparison with the figures given in the Administration Reports, as will be seen from the accompanying printed copy of the accounts submitted by the Municipality, which was forwarded by Government for our records last year. The totals of the major heads of the Government statement have to be given in another statement submitted annually to the Accountant-General also in a form prescribed by Government, and whenever any explanation has been called for thereon, it has been furnished. Should, however, the Corporation or the Standing Committee direct that "the accounts published in the Administration Report should "be condensed by the adoption of a tabular form, &c., &c.," as suggested by the Accountant-General, their wishes and directions will, as usual, be loyally carried out.

12. I now proceed to explain the items in question in the order in which they appear in the Accountant-General's Report.

13. The entries of Profit on Building Certificate and Repairs Certificate Forms are, I presume, stated by the Accountant-General to be "probably sale proceeds of the forms" under some misapprehension; for, as that officer himself has stated, "the profit "would be the difference between the cost and the sale proceeds," the entries represent the excess over cost price realized by the sale of the forms.

14. Explanation, as regards the item of Rs. 1,45,621-15-4, on account of interest and profit on Loan and Reserve Fund Investments has already been given at page 46 of my report, from which it will be seen that, of the above amount, Rs. 1,04,678-15-4 was the interest realized on account of the unexpended balances of the various loans and reserved funds therein specified, and that the sum of Rs. 40,943 was the profit actually realized by the sale of the 4 per cent. Government Paper of a portion of the invested Surplus and Loan Funds. The Accountant-General asks: "Is it correct to regard these items as profit?" We do not call both these items profit. I think it would be quite accurate to call the former amount the interest on our surplus and unspent Loan Funds balances deposited at the Bank or invested in Government Paper, and the latter the profit on such investments

(being the difference between the cost and selling price of the Government Paper of our invested funds). It was never intended to show that the profit on the paper and the interest on the deposits and investments of loan and other surplus balances was a profit on the loans raised. I quite agree with the Accountant-General that, when the unspent balance of a loan raised at a certain rate of interest is invested or deposited at a lower rate of interest, it would result in a loss. This result, however, is unavoidable to a more or less extent according to circumstances as has been more than once explained by you to the Corporation, principally owing to (1) time for raising loans being in the monsoon, *i.e.*, we have to borrow ahead of actual requirements; (2) actual expenditure not coming up to estimates owing to various unforeseen difficulties arising in the progress of works carried out by Contractors and in the acquisition of land by parties refusing to accept our valuations and even the Collector's award, and appealing to the High Court, and thereby delaying for a long period the construction of roads, markets, &c., for which funds are raised in anticipation; and (3) the difficulties of floating loans, more especially at unfavourable times, by a public body that has not previously placed in the market its securities of the value of at least a crore of rupees. The last difficulty (No. 3), however, I am happy to say, does not now exist, as our credit has been sufficiently established, and we would now be able to raise moneys at 4 per cent. on better terms than we did our 6 per cent. Loans in 1867 and 1868 and our 5 per cent. Loans in 1878 and 1885-86, and with a view to prevent any loss by investing unspent balances at lower rates of interest on account of the difficulties Nos. 1 and 2, we have, as advised by the Municipal Solicitors, invested, during the past year, the Loan and other Surplus Funds not required for current expenses, in our own bonds, which the Solicitors state will be "available for disposal in the market gradually as occasion "offers and as necessity requires, and by these means a more favour-"able rate will necessarily be procurable than if the whole of the "debentures were placed in the public market together."

15. The Accountant-General further suggests that the interest realized by deposits lodged at the Bank at an average rate of *2 per cent. together with the †4 per cent. interest realized on Government Paper, amounting in all to Rs. 1,04,678-15-4, should be credited against the charge of 5 per cent. interest paid by the Municipality on the loans, instead of crediting the item to Revenue‡. If the Corporation so wish it, the interest realized on

* Rs. 12,497-3-5. † Rs. 92,181-11-11.

‡ The principle recommended in respect of this Municipality does not, however, appear to have been adopted in the Port Trust accounts audited by the Accountant-General and one of the members of his Outside Audit Department (*vide* page 18, Port Trust Administration Report, 1890-91), in which Rs. 20,45,209-15-7 on account of interest paid on Government and Public Debt, is shown as expenditure, and Rs. 98,025-10-7 received on account of Interest and Miscellaneous, are shown as Revenue, same as we have done. The details of the latter sum given at page 20 show that it includes "interest on current "account with Bank of Bombay, &c.," "interest on investments in Public Securities," "Profit on sale of debentures," and other sundry receipts. It may as well be mentioned here that in the accounts of the Government of India, as also of the United Kingdom, interest received is shown under Revenue, and interest paid on public and other loans, &c., is shown as Expenditure.

loan balances can alone be credited to the amount of interest shown as paid to municipal debenture-holders, &c., the amount realized as interest on our surplus current revenue cash cannot be so credited. It may, however, be explained here that in our Budget estimates we provide for the full amount of interest on our loans, and on the revenue side we budget for any interest that may be expected to be realized on the amount deposited or invested on account of the unspent balances of the loans, as also on our surplus revenue balances.

16. The mode adopted by us is, therefore, both convenient as regards Budget purposes, and is consistent with the provisions of the Municipal Act quoted in the margin,* which require all interest and profit on our investments to be credited to the Municipal Fund, and the loss, if any, on such deposits or investments to be similarly debited to that fund.

* "Sec. 111.—All interest and profits arising from any "investment of or from any transaction in connection with "any money belonging to the Corporation shall be credited "to a fund, which shall be called 'The Municipal Fund, "which shall be held by the Corporation in trust for the "purposes of this Act, subject to the provisions herein "contained."

"Sec.—122 (1) Surplus moneys at the credit of the "Municipal Fund, which are not required for current "charges, may from time to time be deposited at interest "with the Bank for the time being appointed to receive "Government dues or be invested in public securities.

"(2) Such deposits and investments shall be made by "the Commissioner on behalf of the Corporation with the "sanction of the Standing Committee, &c., &c.

"(3) The loss, if any, arising from any such deposit or "investment shall be debited to the Municipal Fund."

17. Mr. Pedder explained the items of profit and loss on stores in his report for 1873, page 22. In his report for 1874, page 15, he stated: "the profit on stores of Rs. 25,492 may be called a nominal "item as the purchase of new plant, &c., has been charged to expen- "diture and credited as a surplus receipt in order to incorporate the "articles of dead stock in the various stock accounts as assets." The actual profit on cost price by sale of stores to contractors and others has been separately shown as revenue. The items of dead and live stock, plant, machinery required for the use of the Health, Engineer's, Fire Brigade, and other Departments of the Municipality, purchased out of the respective Budget allotments of those departments are debited, in the first instance, as the working or maintenance charges of the department. In order, however, to bring the cost of the items on the stock lists of the different departments, the amount thereof has to be debited to the personal stock account of the respective officers by taking credit for the value as surplus receipts. Such surplus is debited with the difference in value of unserviceable stock sold by auction, as also with the cost of live stock that die or are transferred to Pinjrapole, and the net result is credited or debited in Municipal Accounts as nominal profit or loss on stock adjusted, as the case may be. The net result of such adjustment for 1890-91 was a surplus of Rs. 72,175-7-0 as explained at page 47 of my report in the following terms:—

"The nominal profit of Rs. 72,175-7-0 on stock adjusted was the "net result of taking as surplus and charging the value to stock of "departmental officers, all dead stock articles, plant, live stock, "&c., purchased out of Budget and Loan grants after writing off "the loss by auction sale of unserviceable stores and animals and "from mortality or transfer to Pinjrapole of horses and bullocks.

"This item cannot be treated as revenue and has been shown "separately at the end of the statement as suggested by Govern- "ment."

18. The Accountant-General has been able to trace the item of Rs. 25,12,390-2-8 both on the debit and credit sides of the statement of receipts and disbursements, as that amount was deposited with the Bank of Bombay during 1890-91 and was wholly withdrawn from time to time before the close of the same year.*

19. As the same circumstances did not exist in the case of the other two items of Cash and Government Paper deposit accounts (Tansa Loan interest), aggregating Rs. 3,01,432-8-0, the identical amount does not appear on the debit side of the statement, as in the case referred to above in para. 18.

20. The Accountant-General further states: "Then there are "further deposit accounts with the Bank of Bombay at pages 140 "and 141. These may be the transactions as they passed through the "accounts during the year, but the entries, as they appear, are "unintelligible to me. Besides I cannot find from this account the "position of any deposit or investment account." The Accountant-General is correct in his surmise that the receipts and payments shown at pages 140 and 141 are the credit and debit transactions of the year of the respective deposit accounts (*vide* details of the contents of Appendix No. 3 given above in para. 8), and as explained in para. 9 the wording of the account head in the ledger of each deposit account is not sometimes sufficient to make one understand the nature of each transaction shown therein without some explanation. As this account merely gives the yearly totals of the debit and credit items of every deposit, advance and investment, stock, &c., account, the true position of the various deposit accounts cannot be ascertained from Appendix No. 3 alone. The credit or debit balances of the deposit accounts at the end of each year are given in the Liabilities and Assets Schedules, and to arrive at these balances, it is necessary to start with the balances given in the schedules of the preceding year, to add the receipts to the credit balances and deduct the disbursements from the total, as illustrated in the margin†

†Deposits from contractors and others (in cash)—

	Rs.	a.	p.
Balance due to Contractors, &c., on 31st March 1890... ... ... (*Vide* page 136, Annual Report for 1889-90.)	1,24,777	4	10
Add—Receipts (page 140 of Report for 1890-91)	3,11,239	5	2
	4,36,016	10	0
Deduct—Payments (page 141 of Report for 1890-91)	2,49,220	10	0
Balance due to contractors, &c., on 31st March 1891 as per Appendix No. 4 (page 146, Report for 1890-91)	1,86,796	0	0

* In the same way an item of Rs. 14,19,800-10-10 can be traced in the statement of receipts and disbursements during the year 1890-91 as debited and credited to the Town Duty collections on account of the Municipal Fund, as the total amount collected on our account was wholly refunded to us. It will be observed that our Receipts and Disbursements Statement (Appendix No. 3) is almost similar to that published in the Port Trust Administration Report at pages 40 and 41; excepting that the latter statement has two extra columns, one for Government Securities and another for Port Trust and Municipal Bonds in addition to that for cash transactions (including transfers) given in the former, and that the Port Trust statement gives only the totals of revenue and expenditure, giving a reference to the detailed statements, and the receipts and disbursements on account of advances, deposits, &c., are shown under a few classified heads, whereas our account gives all the major, minor and detail heads of revenue and expenditure and shows the receipts and disbursements under every other ledger head of advances, deposits, investments, stock, &c., &c.

with respect to the first item of the different deposits shown at pages 140 and 141.*

21. The opening balance of Rs. 3,09,274-15-8 and the closing balance of Rs. 3,30,157-11-7 (and not Rs. 3,03,157-11-7 as stated in para. 7 of the Accountant-General's letter, it is presumed, through a clerical error) represent the actual cash balances at the Office and Bank Treasuries, which alone can be shown in a cash account, apart from the loan and reserve funds balances, either deposited at interest or invested in Government or other securities, and which consequently are shown as assets at page 148 under investments (Appendix No. 5). It is further pointed out by the above officer: "I notice at page 140, besides a large "investment in Government Paper, there was Rs. 12,60,791† in "cash deposited with the Bank of Bombay." I am afraid this amount which is shown as a receipt, it having been withdrawn from the Bank's Surplus Cash Deposit Account, has been misunderstood for the amount of surplus cash deposited with the Bank, which is given on the disbursement side at Rs. 26,46,849-5-5 at page 141. The actual balance of surplus cash deposit at the Bank is given in the Asset Statement No. 5, page 148, at Rs. 13,86,090. To arrive at this balance due by the Bank, it is necessary to start with the debit balance of this account on 31st March 1890, and respectively add to and deduct from it the above sums paid and withdrawn from the Bank during the year as shown below and as explained above in para. 20 in the case of cash deposit from contractors and others:—

	Rs.	a.	p.
Balance on 31st March 1890	.....		
Add—Amount paid to the Bank (page 141)* ...	26,46,849	5	5
	26,46,849	5	5
Deduct—Amount withdrawn or received from the Bank (page 140)	12,60,759	5	5
Balance due by the Bank on 31st March 1891 (page 148)	13,86,090	0	0

As the cash account only showed the closing balance in hand in the Office treasury and the Bank at current account, and as the Municipality had surplus balances invested in Government Paper or deposited at the Bank in interest-bearing account, as also Loan Fund balances invested or deposited in

* Similarly from the statement published at pages 40 and 41 of the Port Trust Administration Report for 1890-91, we "cannot find the position of" the Cash Deposit Account from contractors. This statement like our Statement No. 3 gives on the receipt side, page 40, Rs. 22,829-2-5 as deposited by contractors and on the disbursement side, page 41, Rs. 42,930-1-10 as deposits returned. To arrive at the balance of Rs. 16,536-2-8 shown as a liability to contractors and others on 31st March 1891 at page 4, the same procedure has to be adopted as illustrated above in the case of the Deposit Account of Municipal contractors, &c., *viz* :—

	Rs.	a.	p.
Balance due to contractors, &c., on 31st March 1890, on account of their deposits (page 2, Report for 1889-90)	36,637	2	1
Add—Deposits received (page 40, Report for 1890-91)	22,829	2	5
	59,466	4	6
Deduct—Deposits returned (page 41, Report for 1890-91)	42,930	1	10
Balance due to contractors on 31st March 1891 (page 4, Report for 1890-91)	16,536	2	8

† This amount should be Rs. 12,60,759-5-5 (see page 140 referred to).

interest-bearing accounts, and as the loan balances were to be kept intact for loan works expenditure, and as the former two balances of current cash in Office and the Bank and of the surplus invested in securities and deposited with the Bank at interest included cash deposits and certain other liabilities to be paid to contractors, Income Tax Department, &c., and the premia on loans to be subsequently appropriated as may be sanctioned by the Corporation, and as funds had also been advanced to Loan works, Departmental works, Municipal officers, &c., we could not show the exact amount of the real workable balance, including recoverable advances, &c. and all investments other than unspent loan and sinking and municipal buildings fire insurance funds balances and excluding payable deposits, premia (specially reserved under the directions of the Corporation), &c., &c., included in the cash and invested balances at any one place in the usual account statements. It will be seen from the details given at pages 67 to 69 of my report, how the workable balance of Rs. 17,29,269-14-4 at the end of 1890-91 referred to by the Commissioner at page 5 of his report was arrived at. Such details were given in my report for the first time in 1876 as required by Mr. Grant, the then Municipal Commissioner, as in that year we commenced advancing funds from current revenue for Tulsi loan works. Similar details have since then been annually given in my reports, and it will be seen that, as our transactions on account of loan works advances, &c., increased, these details have also been lengthened from a dozen lines in 1876 to over 2 pages of closely printed matter in 1890-91.

22. I agree with the Accountant-General that the net amount of premium received on loans raised from the public should be shown as a separate item of receipts and not as an item of liabilities. But it has been so shown in our accounts, as by a resolution of the Corporation, No. 5294, dated 19th November 1888, they decided that the net premia received should be credited to the particular loan on which the premium was received, and unless specially applied by that body appropriated towards the reduction of the next instalment that is issued.* The Accountant-General, in reply to a similar objection raised as per para. 3 of his No. $\frac{B.R.}{24374}$, dated 7th November 1889, quoted in the margin,† was informed of the above resolution as per para. 2 of my No. 2350 of 3rd

† "On the credit side a sum of Rs. 36,58,160-1-6 has "been shown as amount of loan raised, but from the "special loan statement returned with this office letter "No. $\frac{B.R.}{24155}$, dated 5th November 1889, it appears that it "includes Rs. 1,78,660-8-6 received by the Municipality "as premium on loans raised. This amount cannot be "regarded as a 'loan' as there is no liability to repay "it and should, I am of opinion, be shown as a distinct "receipt."

*It may be here pointed out that the discount at 13 and 14 per cent. on the Port Trust Loans for 10 lakhs raised in 1885-86 and 1886-87, amounting to Rs. 1,39,850, is shown under suspense account as an asset at page 5, Administration Report, 1890-91), pending its being gradually written off as expenditure. The proportionate amount so written off during 1890-91 was Rs. 5,000, and Rs. 26,000 are shown as adjusted in this way from 1885-86 to 1890-91.

When it is urged that, as the amounts of premia received by us on our loans shown in our schedule of liabilities are not "repayable, they form items of profit and should therefore be treated as assets," it can similarly be argued that the discount on Port Trust Loans not being recoverable or realizable as an asset, forms an item of loss, and should consequently be treated as a liability.

January 1890 also quoted in the margin*, copy of which was forwarded to him under Sir Charles Ollivant's No. 7506, dated the 16th idem.

* "The amount of premia referred to in para. 3 "was included in the amount of loans raised as shown "on the credit side of the statement submitted to the "Accountant-General, and was not shown as a distinct "item of receipt, as under a recent resolution of the Muni- "cipal Corporation they decided that the net premia re- "ceived should be credited to the particular loan on which "the premia are received, and unless specially applied by "that body, appropriated towards the reduction of the "amount of the next instalment that is issued."

23. The item of commission on private works should be treated as a receipt as pointed out by the Accountant-General, but it has been shown as a liability pending the recovery of all the outstanding private works bills, such as those against the Bandora Municipality, the Electric Light Co., and against certain house-owners for repairs, &c., to private lanes, &c., which are in dispute, as, in the event of any of the bills being irrecoverable, the above amount of commission will be required to adjust the amount of such bills. When all the disputed outstanding bills are fully recovered and adjusted, such amount as may then appear to the credit of the commission account will be credited to the Municipal Fund as an item of receipts. Should, however, the Corporation decide to treat the whole amount of commission as receipt, whether the amount of private works bills, which include such commission, are recovered or not, the amount can be so treated in the current year's accounts, and, in the event of the private works bills being not recovered subsequently, the whole amount thereof can be written off with Corporation's sanction from time to time.

24. I presume the Municipal Auditors will, when required by the Corporation, report on the remarks in para. 8 of the Accountant-General's letter. I can, however, state that, although I think, with the Accountant-General, that their report is more lengthy than it really ought to be, yet the additional information given by them has been approved by Government and annually by the Standing Committee in their Review from 1885-86, and that they do "certify that the Financial "Statements published with the Administration Report are correct," and that "they verify the balances of Cash and Government "Securities belonging to or deposited with the Corporation by "an examination of the bank pass-books, safe custody receipts and "the Cash Government Notes in the office" (*vide* paras. 3 and 4 of their report, dated 8th September 1891, and their report, dated 5th October 1891). In paras. 119 to 122 and 154 and 155, the Auditors seem to have drawn attention to certain irregularities and the Standing Committee and also Government seem to have noticed them (*vide* para. 15 of the Committee's Review and para. 3, Government Resolution No. 973, dated 25th March 1892, General Department).

SORABJI NAVROJI COOPER,
Chief Accountant.

FORM,

Statement showing the Income of the

1	Name of District.	...
2	Serial Number of Municipality.	
3	Name of Municipality.	Bombay.
4	By balance in hand at the close of last year.	Rs. a. p. 3,09,274 15 6

| 5 | Octroi. | | |

No. II.

Bombay Municipality during the year ending 31st March 1891.

| | Arrear collections for the previous year. | Collections for the current year. | | |

FORM No.

Statement showing the Income of the Bombay

14

MISCELLANEOUS RECEIPTS—*continued.*

Income derived from Markets (Rents, Fees, Sale of Refuse, &c.)	Conservancy and Road-cleaning. (Fees, Sale-Proceeds of night-soil, street refuse, &c.).	Municipal Fines.	Premium on Loans.	Sundries (Rent of Municipal Lands, Receipts from Public Gardens, &c.).	School Fees.	Payments for Municipal services rendered to individuals.	Grants-in-Aid from Provincial or Local Funds.	Total.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Market Receipts (Page 114) 3,29,376 0 8								
Deduct—								
Slaughter fees (shown in Column 5 (b)) 96,196 9 0								
2,33,079 7 8								
Miscellaneous Receipts—								
Sale of Bones, &c. (Page 118)	1,035 8 0							
Cleaning drains („ „)	2,452 0 6							
3,487 8 6								
		(Page 114)						
		7,669 3 0						
Premium on Tansa Water Works Loan—Amount raised in 1890-91 (Page 132)			34,140 5 8					
Do. Agripada House Sullage Water Connections Loan of Rs. 2,48,000 (Page 140)			4,722 8 0					
Do. 35 Lakhs Loan for various Sanitary Works (Water Works portion) (Page 132) .. Rs. a. p. 21,713 2 8								
Do. do. (Municipal Fund portion) (Page 140) 59,539 2 6								
(Page 80) 81,252 5 2								
			1,20,115 2 10					
Public Gardens (Page 120)				30,371 11 7				
Contribution from Municipal Servants towards Pension, &c., Fund (Page 114) ..				14 890 5 2				
Miscellaneous fees (Page 114)				39,961 6 7				
Miscellaneous Receipts (Page 118) 1,21,859 0 6								
Deduct— Rs. a. p.								
Sale of lands (shown under Proceeds of land, &c.) .. 9,817 15 2								
Sale of Bones .. (Shown under Conservancy and Road-cleaning.) 1,035 8 0								
Cleaning drains. 2,452 0 6								
3,487 8 6	13,305 7 8							
				1,08,553 8 9				
Profit by sale, &c., of Stores (Page 120)				7,321 19 4				
Interest and profit on Loan and Reserve Fund Investment (Page 120) ..				1,45,621 15 4				
Do. on the Municipal Building Fund Investment (Page 120) ..				28,281 13 1				
Do. on the Municipal Buildings Fire Insurance Fund Investment (Page 120)				113 4 5				
Do. on the 5 per cent. Municipal Loans Sinking Fund Investment (Page 120)				12,402 9 9				
Miscellaneous Savings (Page 116)				50 4 9				
				3,87,488 11 9				
Shown under Conservancy Cess and Water Rate								
								7,81,558 0 11

SORABJI NAVROJI COOPER,
Chief Accountant.

II.—*continued.*

Municipality during the year ending 31st March 1891—*continued.*

| | | |

FORM

Statement showing the Expenditure of the

| 1 | 2 | 3 | 4 | | |

No. III.

Bombay Municipality for the year ending 31st March 1891.

6

PUBLIC HEALTH.

tion of Slaughter-houses, &c.)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	
					Water Works.				Conservancy.	
	Repairs (to Markets, Dispensaries, &c.).	Maintenance of Medical Institutions (Dispensary Establishment, Purchase of Medicines, &c.).	Vaccination (Establishment).	Registration of Births and Deaths.	Capital Outlay.	Establishment Repairs.	Road-watering (Establishment, Purchase of Water-carts, Repairs, &c.).	Road-cleaning (Establishment, Repairs, Purchase and repair of Dust-bins).	Establishment (Repairs, Purchase of carts, dry-earth, land for burying night-soil, &c.).	Refunds, &c., of Fines and Overcharges.
Loan Works—Capital Outlay (Page 137)— Rs. a. p.										
Extension of Erskine Road Market 46,239 9 0										
Do. Bhuleshvar Market 25,871 8 2										
72,111 2 2										
Deduct— Value of land added to the Public Road out of the area required for the Bhuleshvar Market extension... .. .. 47,206 8 11										
24,904 14 3										
Add— Enlargement of Dhobi Lines at Mahdishkhmi ... 7,832 0 7										
Chawl for Halalkhors in Kharsetji Sukhlaji Street. 181 0 0										
8,013 0 7										
33,917 14 10										
40,050 13 7										
Repairs to Markets (Page 117)..	15,680 7 3									
Gokuldas Tejpal Hospital (Page 125) 32,405 13 4										
Jaffer Sulleman's Dispensary („ „) 3,000 0 0										
Homeless Leper Asylum at Matunga („ 127) 3,194 11 11										
Infectious Diseases („ 116) 6,436 8 0										
45,037 1 3										
(Page 115)		15,269 4 10								
Registration (Page 116) 19,865 10 3										
Cemeteries („ „) 6,406 13 4										
25,272 7 7										
Water Works—New works paid out of Loans (Page 133) 39,64,941 1 11										
Do. Current Revenue („ 131) 13,750 9 9										
39,78,691 11 8										
Water Works Maintenance (Page 131) 1,65,795 11 3										
Proportion of Engineer's Establishment („ „) 10,597 2 4										
1,76,393 13 7										
(Page 117)							72,549 11 0			
Included in Column (i).										
General Supervision (Page 113) 44,802 14 7										
Conservancy Branch („ 115) 10,40,378 6 9										
Laboratory („ „) 294 12 0										
Maintenance of Dhobi Lines at Mahalakshmi („ „) 28,113 13 0										
Milch Cattle Stables and Rooms („ „) 8,276 1 2										
Tank Conservancy („ „) 5,008 0 4										
Cost of Survey for a scheme for the removal of Town Sweepings („ 127) 1,164 5 11										
11,36,988 5 9										
.....										
.....										
										Remission of Cess.

FORM No. 6

Statement showing the Expenditure of the Bombay PUBLIC HEALTH—*continued*.

| | | |

III.—*continued.*

Municipality for the year ending 31st March 1891—*continued.*

| 7 | 8 | | |

FORM No.

Statement showing the Expenditure of the Bombay

DEBT.

	Loans (Instalments paid during the year).	Interest.		Investments in Government Securities.	Deposits (Salaries attached, Contractors', &c.)
		Previous years.	Current year.		
	Rs. a. p.				
New Drainage Loan of 17 Lakhs (Page 141)	34,000 0 0				
Less—Water Works portion	14,105 6 9				
	19,894 9 3				
2nd 15 Lakhs Loan and Surface Drainage of 6 Lakhs (Page 141)	45,548 11 4				
44 Lakhs Sanitary Works Loans	61,000 0 0				
Less—Water Works portion	22,010 3 6				
	28,989 12 6				
Market Loan paid out of Invested Sinking Fund.. ..	500 0 0				
	94,928 1 1				
Add—					
Payment towards the reduction of Water Works Loans, &c. (Page 133)	1,97,571 14 1				
	92,499 15 2				
		38,700 15 11			
Interest on Loans, *viz.*—					
Interest paid to private parties (Page 125)			3,97,174 14 2		
Interest paid or invested on account of Water Works Loans (Pages 131 and 133)	8,98,575 10 9				
Less—Paid out of invested fund..	93,536 14 3				
			8,05,038 12 6		
			12,02,213 10 8		
Less—					
Interest paid on account of previous years			38,700 15 11		
				11,63,512 10 9	
Add—					
Charges on account of Loans (Page 126)				7,747 3 10	
				11,71,260 14 7	
35 Lakhs Loan for various Sanitary Works (Page 141) ..				24,98,510 15 2	
Surplus cash deposit account				2,93,333 3 7	
				27,92,844 2 9	
Deposit, &c. (Page 141)					1,09,15,703 0 9
Add—					
Interest on Tansa Loan in excess of the Annual Budget provision paid out of the Invested Fund deposited at the Bank of Bombay (Page 133)					93,636 14 8
Tansa Loan, &c., Deposit Account, Water Works Account, (Page 133)..					27,20,286 12 5
					1,37,29,625 11 5
Less—					
Shown under Investments in Government securities ..					27,92,844 2 9
					1,09,36,681 8 8
Less—					
Building Fund invested out of Current Revenue shown under Public Convenience (New Works) ..					28,906 13 1
Municipal Buildings Fire Insurance Fund (shown under Miscellaneous)					3,113 4 5
Investments on account of Sinking Fund shown below under Payments to Sinking Fund					50,177 9 9
					82,197 11 3
					1,08,54,483 13 5

SORABJI NAVAROJI COOPER,
Chief Accountant.

III.—*concluded.*

Municipality for the year ending 31st March 1891—*concluded.*

Advances (on account of Departmental Works, &c.)				Closing Balance.		Payments to Sinking Fund.		Grand Total.		REMARKS.
								12		
Advance, &c. (Page 142)			1,36,37,433	10	0					
Add—										
Tapsi Loan Government Paper, &c., Deposit Account, Water Works Account (Page 138)			27,20,385	12	5			1,63,57,819	6	5
Deduct—										
Shown under the following heads :—										
Buildings and other Works (Public Health) Column 6 (4)			32,917	14	10					
Drainage Works (Public Health) Column 6 (5)			4,13,113	12	1					
New Works (Public Works) Column 8			1,66,818	8	1					
Deposits..			1,09,13,703	0	9					
			27,20,285	12	5	1,43,25,988	13	2		
Loan Instalments Debt		30,980	11	11				1,42,49,889	0	2
Do. do.		14,563	15	5						
		45,543	11	4						
Do. do.	84,000	0	0							
Deduct—										
Bhandarwada Water Works Loan ..	14,105	8	9							
	19,894	3	3							
Market Loan	500	0	0							
44 Lakhs Sanitary Works Loan (Page 141) ..	51,000	0	0							
Less—Transferred to Water Works ..	22,010	3	6	28,989	12	6	94,928	1,43,43,767	1	8
								19,13,752	6	9
Less—Adjustment on account of nominal profit on Stock								72,175	7	0
								18,41,576	14	2
								3,30,157	11	7
44 Lakhs Sanitary Works Loan								19,890	9	4
do. do. do.								6 611	12	4
13 do. do. do. (Page 81)								12,066	5	9
10,08,500 Miscellaneous Works Loan								9,209	7	4
2,48,000 Agripada House Sullage Water Connections Loan								2,400	0	0
Less— „ 140	Page 141	Rs.	1,51,229	9	9					
	„ 140	„	1,01,052	0	0			50,177	9	9
								2,60,60,385	6	11
Memorandum of Liabilities and Claims—										
Liabilities—										
Balance of Loans—										
A.—To Government								73,31,264	3	10
„ Public..								2,50,50,500	0	0
								3,24,31,864	3	10
Less— Amount made over to Sinking Fund								2,93,883	8	4
Net Balance of Loan ..								3,21,37,981	0	6
Deposits				2,44,865	11	4				
Miscellaneous (Deposits in Government Paper, &c., &c.)				11,68,427	8	2				
Total Liabilities ..								14,01,293	3	8
								3,35,39,264	4	0
Claims—										
Advances Recoverable..								2,59,060	7	1
Miscellaneous (Government Paper deposited by Contractors and lodged with the Bank of Bombay								11,09,800	0	0
								13,68,860	7	1
							Net Amount of Debt ..	3,21,70,403	12	11

T. S. WEIR,

Acting Municipal Commissioner for the City of Bombay.

It was agreed that the following remarks by the Standing Committee and the Commissioner be submitted to the Corporation with reference to their Resolution No. 5365, dated 22nd August 1892.

No. 7096. "That on the subject of the Corporation's Resolution No. 5365, dated 22nd August 1892, as per margin, the Standing Committee and the Commissioner beg to offer the following remarks.

"That the following be forwarded to the Standing Committee and the Commissioner for remarks:—Letter No. 2556, General Department, dated 25th July 1892, from Mr. Under Secretary Harvey, forwarding extract paragraphs 7 and 8 of a letter No. Q. A. 656, dated 11th April last, containing some remarks made by the Accountant General on the account system of the Bombay Municipality as disclosed in the Administration Report of the Municipal Commissioner for 1890-91."

"That with reference to the Accountant General's letter No. 656, dated 11th April last, forwarded to the President of the Corporation with Mr. Under Secretary Harvey's letter No. 2556, dated 25th July, on the account system of the Municipality, the attention of the Corporation be drawn to the fact, that the basis of the system was established with the approval of the Bench of Justices in 1866 and after modifications made in 1869 on the suggestion of a Committee of which Mr. Chapman, then Accountant General, was President, was revised in 1871 by Sir Theodore (then Mr.) Hope. That after further revision by Sir Charles (then Mr.) Ollivant the system now followed was finally approved by the Standing Committee, section 123 of the Act directing that 'accounts of the receipts and expenditure of the Corporation shall be kept in such manner and in such forms as the Standing Committee shall from time to time prescribe.'

"That on the 9th October 1889, a Sub-Committee of the Standing Committee reported that after having gone carefully through the appendices to the Commissioner's Administration Report for 1887-88, they could only recommend the omission of the Dead Stock return and of certain unimportant returns in the Engineer's Department. That the accounts described by the Accountant General as being so 'voluminous' have therefore continued to be published in their present form.

"That the other objections raised by the Accountant General appear to be satisfactorily and fully answered by the Commissioner and the Chief Accountant in the papers as per margin, forwarded herewith,

Letter from the Commissioner to the Municipal Secretary No. 11619, dated 27th August 1892.
Memorandum from the Chief Accountant to the Commissioner No. 1707, dated 17th idem.

from the contents of which the Corporation will find that the interest and profit on loan and reserve fund investments are credited and dealt with as the law directs, and that in the Port Trust accounts which are audited by the Accountant-General, interest and profit on investments and loans are treated substantially in the same way ; whilst in the accounts both of the Provincial and Imperial Governments interest on loans is also credited to General Revenue, and interest on investments is credited as Revenue. This is also the case in the accounts of upcountry Municipalities as published in the *Bombay Government Gazette*.

" As regards the appropriation of premia on loans raised by the Municipality it may be pointed out that up to 1887-88 all premia, less charges for brokerage, stamps, printing, &c., were credited as items of revenue, in the same way that discounts on the loans raised in 1878 and 1885-86 were debited as items of ordinary Municipal expenditure. Under the terms of the Corporation's Resolution 5294, dated 19th November 1888, quoted by the Chief Accountant, the net premia have been credited to the respective loans and consequently appear as liabilities pending special appropriation, in the same way as the reserve funds and profits of Banks and other Companies are shown as liabilities pending appropriation of the reserve funds to meet losses in any particular year or years, and to payment of dividends to shareholders or otherwise. This arrangement of reserving the premia for subsequent appropriation has enabled the Corporation to sanction the payment of Rs. 1,50,000 of the excess on the Tansa Water Works expenditure and will further enable them to sanction a like amount for further estimated excesses on the works, thereby avoiding the necessity of having to raise an additional loan of Rs. 3 lakhs.

The Chief Accountant in his note to para. 22 of his report (page 12) shows that discount on the Port Trust Loans appears as an asset in the Trust accounts, pending the amount being gradually written off as expenditure at the rate of about Rs. 5,000 per annum.

" That if it should be the opinion of the Corporation that the published accounts should be curtailed, the Committee will be glad to consider the question although, as above stated, it is only three years ago since the Committee came to the conclusion that the appendices to the Report ought not to be curtailed.

" No doubt, if called upon, the Auditors will reply fully to the remarks of the Accountant-General in para. 8 of his

letter, but the Corporation will observe from para. 24 of the Chief Accountant's memorandum that the Accountant-General seems to have overlooked the fact that the accounts are certified to, and the balances, &c., stated to have been checked by the Auditors, and moreover that irregularities, when noticed, have been brought by them to the notice of the Corporation." (See Administration Report for 1890-91 : paras. 3, 4 & 7, page 598 ; paras. 119-122, page 631; paras. 154-5, pages 637 & 638 ; page 646 and paras. 2, 3, 4 & 5, page 648.)

The following statement* was laid on the table:—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 2nd October 1892.

BOMBAY, 12*th October* 1892.

AT the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., C.S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 5th instant, were signed.

The seal of the Corporation was affixed to deeds of agreement :—

No. 7152. (1) Between Bai Meherbai Sorabji Master and the Corporation, securing to the Municipality the right to acquire hereafter (when the two houses on either side are set back) the set back of her property situate at No. 18, Marine 3rd Street, without payment of any compensation in respect of the unauthorized work indicated on the plan annexed to the deed, and at the rate of Rs. 10 per square yard, for any land shown on the said plan, scored red, to be there taken up, inclusive of any loss, damage or expense sustained by her by reason of such acquisition.

No. 7153. (2) With Messrs. Suggaji Ramji and Tookaram Daji for cultivating Municipal ground at Coorla.

No. 7154. (3) With ditto for ditto at Tardeo.

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* See Appendix B.

The seal was affixed to deeds of contract :—

No. 7155. (1) With Messrs. Richardson & Cruddas for the supply and erection of certain additions to the bridge over the G. I. P. Railway at Ghat-kopar.

No. 7156. (2) With Messrs. Hiraji, N. Spencer & Co. for the work of laying water tables, kerbing and set-stone paving on crossings in various parts of Bombay.

No. 7157. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 15398, dated this day, sanction be given to the cutting off of water-connections as per list submitted therewith."

No. 7158. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 14931, dated 6th instant, sanction be given to the transfer of Rs. 130-2-6, from savings in the grant for Drainage fair weather connection of the open drain at the junction of DeLisle and Arthur Roads with 18" pipe sewer, new works, budget for 1892-93, to extra work on storm-water drain in Jagannath Sadashiv Street, new works, budget for 1891-92, which grant has been renewed."

No. 7159. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 14930, dated 6th instant, and subject to the approval of the Corporation, under Section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 5,000 from savings in the grant for miscellaneous (Drainage), Section 3 A, to same department, Section 2, Stores, inspecting manholes and sewers, &c., A, miscellaneous drainage, to meet expenditure (on account of stores) incurred in cleaning the main sewers and miscellaneous drains and gutters."

No. 7160. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 15281, dated 11th instant, sanction be given to the acceptance by him of the tender of Messrs. Hadji Kassum & Co. for the supply of clothing during the ensuing year (for 2 years' wear) at the following rates :—

For Havildars' clothing	...Rs.	40	0 0
„ Peons' „	... „	22	0 0
„ Animal-keepers at Victoria Gardens	... „	13	12 0

"The cost to be debited to budget grants."

Considered the following :—

No. 7037 of 1892-93.

24th September 1892.

To the COMMISSIONER.

Sir,—I have the honour to bring to your notice that in laying, departmentally, new table stones below the kerbing of footpaths, in lieu of old and rejected stones, we have to pay Rs. 65 per 100

r. ft. for the stones alone, this being the Annual Repair Contractor's rate, item No. A1299. The concrete underneath costs from Rs. 8 to 10, and the labour for fixing the stones costs Rs. 10 to 15 per 100 r. ft., or in all, the cost is Rs. 83 to 90 per 100 r. ft. The paving Contractors' rate for similar rate is only Rs. 57 per 100 r. ft., including excavation, concrete, &c., complete, being less than the rate now paid for the slabs alone. I would, therefore, request the favour of your sanction to my having about 5,000 r. ft. of table stones fixed through the paving contractors and paid for from the Road Repair grant, charging Rs. 45 per 100 r. ft. to item 1—D, Road Repairs and Maintenance, and Rs. 12 to item No. 2—Labour. —I have, &c.,

NASARVANJI D. BHADA, A.M.I.C.E.,
for Acting Executive Engineer.

No. 15059 of *7th August* 1892.

Forwarded to the Standing Committee for favour of sanction.

H. A. ACWORTH, Commissioner.

No. 7161. *Resolved* : "That, as recommended by the Commissioner, in his memorandum No. 15059, dated 7th instant, and instead of the work being done departmentally at a larger cost, sanction be given to the work of laying down 5,000 r. ft. or thereabout of new table stones below the kerbing of footpaths by the paving contractors Messrs. Hiraji, N. Spencer & Co., at the rate of Rs. 57 per 100 r. ft. including excavation, concrete, &c., complete. The amount to be paid out of the Road Repairs grant, Rs. 45 per 100 r. ft. being debited to Item 1—D, Road Repairs and Maintenance, and Rs. 12 to Item No. 2—Labour."

No. 7162. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 14881, dated 5th instant, the Corporation be recommended to sanction the employment of the following establishment for cleaning the new latrine at Bandora Slaughter Houses, and removing the contents thereof :—

		Rs.	a.	p.	
1	Halalkhore to clean the latrine and fill the cart at Rs. 11-8-0 per month, or	57	8	0	for the remaining 5 months of the year.
1	Driver at Rs. 11-8-0 per month ...	57	8	0	
1	Night-soil cart	250	0	0	
1½	Pairs of bullocks	250	0	0	
	Toll fee from Bandora to Coorla at the rate of 4 annas per day ...	37	12	0	
	Total ...Rs.	652	12	0	

"This cost for the five remaining months of the year (Rs. 652-12-0 as above) to be met from savings in the grant for building the latrine."

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 14705, dated 4th instant, the Corporation be recommended to sanction the writing off of annas 5 and pies 9, being the cost incurred by the Engineering Department for the removal, under section 351 of the Act, of a shed at Sion belonging to a sweeper named Mitha Sundha, consisting of mud walls and jaoli roof, as the cost of the procedure for the recovery of the amount under section 491 of the Act would be more than the sum recoverable." No. 7163.

Resolved : "That the following be *recorded* :—Letter No. 15189, dated 10th instant, from the Commissioner, reporting, under section 69 (*d*) of the Municipal Act, that he has entrusted the work of making the casket presented to H. E. the Viceroy on the occasion of Tansa opening ceremony to Messrs. Hamilton & Co. at a cost of Rs. 2,500 *plus* Rs. 25 for taking photographs of the casket." No. 7164.

In accordance with notice, it was proposed by Kaikhosro N. Kabraji, Esq. :—

"That the Municipal Commissioner be asked (1) What precautions are taken to carry into effect the Standing Committee's request made in their resolution No. 8369, at their meeting, dated 4th November last ? (2) What is the number of additional licenses issued for the sale of fireworks during the present Divali month as compared with the number last year ? (3) What is the limit to which they are restricted for the remaining period of this month."

Not seconded.

Resolved : "That the following be *recorded* :—Memoranda Nos. 14694 and 15260, dated 4th and 11th instant, from the Commissioner, reporting that there was no case of burst on the Tansa line during the weeks ending 1st and 8th idem." No. 7166.

Resolved : "That the following be *recorded* :—Memorandum No. 14695, dated 4th instant, from the Commissioner, reporting, with reference to the resolution of the Committee No. 4484, dated 3rd October 1888, the transfer of Rs. 507-11-6, from the Municipal Buildings Fire Insurance Fund deposit account, to the Municipal General Fund pass-book, on 30th ultimo."* No. 7167.

* The Chief Accountant reports that the balance standing to the credit of the above deposit account after effecting the transfer is as under :—

In Cash	Rs.	70	2 1
In Municipal Debentures for ... Rs.... 9,500 =	„	9,500	0 0
	Rs.	9,570	2 1

No. 7168. *Resolved* : "That the following be forwarded to the Commissioner for disposal, and that the applicant be informed accordingly :—Letter, dated 6th instant, from Mr. Safar Ali Zahawarudeen, on the subject of his dismissal from the Fire Brigade Department."

No. 7169. *Resolved* : "That the following be *recorded* :—Memorandum No. 15006, dated 7th instant, from the Commissioner, forwarding analyses of water as under :—

Sample of unfiltered Tulsi water obtained from the Inlet Well, Malabar Hill Reservoir, on the 3rd October 1892.

	Parts per million.
Free Ammonia	none.
Albumenoid Ammonia	·09

Sample of filtered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 3rd October 1892.

	Parts per million.
Free Ammonia	·005
Albumenoid Ammonia	·07

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir on the 1st October 1892.

	Parts per million.
Free Ammonia	·01
Albumenoid Ammonia	·08

Sample of Tansa water taken from a hydrant on the 27" main in Arthur Road on the 3rd October 1892.

	Parts per million.
Free Ammonia	·005
Albumenoid Ammonia	·04"

The following return was read and *recorded* :—

No. 7170. Return of fires at Falkland Road, forwarded with the Commissioner's memorandum No. 15210, dated 10th October 1892.*

No. 7171. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 15145, dated 8th instant, the Corporation be recommended to sanction the payment of Rs. 3,016-15-10 from surplus cash balance† to meet the cost of converting 200 single-pole scavengering carts into movable pole dustbin carts."

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* *See* Appendix C.

† Provision for this work was made in the budget for 1890-91, but as there were other important works in hand at the Municipal Workshops, these carts could not be converted during that year, and the grant, not having been renewed, has lapsed and forms a part of the surplus cash balance.

The Chief Accountant reports to the Commisssioner that the state of the surplus cash balance is as under :—

Unappropriated surplus referred to at page 102 of the Administration Report for 1891-92				Rs. 5,00,000	0 0
Deduct—					
Amount of grants sanctioned (excluding temporary advances to be adjusted hereafter)	Rs.	17,780	5 7		
Recommended for sanction	„	4,562	0 0		
				22,342	5 7
Balance...	Rs.			4,77,657	10 5

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 9th October 1892.

No. 7172. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 15321, dated 11th instant, sanction be given to the acceptance by him of the tender of Messrs. Jivanji Dhunjibhoy & Co., the lowest of 4 tenders received, for the construction of a new mutton market at the Arthur Crawford Markets. The amount Rs. 41,870·865 to be paid out of the grant for the work."

No. 7173. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 15280, dated 11th instant, the Corporation be recommended to sanction the writing off of Rs. 941-13-1 from the dead stock return of the Health Department, being the book-value of 30 dust-bin carts which are reported to be altogether broken and unfit for further repairs."

No. 7174. *Resolved* : "That the following be laid on the table :— Letter, dated 11th instant, from Messrs. Ardaseer Framjee Moos and Narnabhai R. Ranina, stating that they have audited the weekly statements of Receipts and Disbursments at the end of each week for the month of September last, and compared them with the General and subsidiary Ledgers and Journals, and found them correct. Forwarding the usual Summary and Statement of their scrutiny of the accounts."

No. 7174*a*. " With reference to the Committee's Resolution No. 7089, dated 5th instant, the Commissioner now informed the Committee that he had had a statement prepared, which shewed that between the 1st July and the 10th instant 218 notices were issued by the Building Department for the demolition of dangerous buildings.

It was agreed that on account of the Divali holidays the next meeting of the Committee be held on Tuesday, the 18th instant, at 4 P. M.

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* *See* Appendix B.

BOMBAY, 18*th October* 1892.

At the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L. M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 12th instant were signed.

No. 7540. The seal of the Corporation was affixed to deed of contract with Messrs. Sittaram Luxmon and Bibra for the work of constructing engine and boiler-house, extensions of sewage main and outfall sewer, &c., at Love Grove.

The seal of the Corporation was affixed to the following 9 attested duplicate debentures : Nos. 1614, 1709, 3122, 3123, 3156, 3729, and 4000—2 of the Municipal loan of 1878; ditto to 26 consolidated debentures Nos. 2254-73 (Rs. 10,000), Nos. 2274-79 (Rs. 3,000), Nos. 2425-26 (Rs. 1,000), Nos. 2427-28 (Rs. 1,000), Nos. 2429-30 (Rs. 1,000), Nos. 2433-34 (Rs. 1,000), Nos. 2431-32 (Rs. 1,000), Nos. 2435-36 (Rs. 1,000), Nos. 2816-19 (Rs. 2,000), Nos. 2932-41 (Rs. 5,000), Nos. 2942-51 (Rs. 5,000), Nos. 3148-51 (Rs. 2,000), Nos. 2962-63 (Rs. 1,000), Nos. 3152-55 (Rs. 2,000), Nos. 3268-87 (Rs. 10,000), Nos. 3548-67 (Rs. 10,000), Nos. 3568-71 (Rs. 2,000), Nos. 4107-10 (Rs. 2,000), Nos. 2234-53 (Rs. 10,000), Nos. 2822-31 (Rs. 5,000), Nos. 3288-93 (Rs. 3,000), Nos. 4097-4106 (Rs. 5,000), Nos. 2174-93 (Rs. 10,000), Nos. 3764-71 (Rs. 4,000), Nos. 3687-3706 (Rs. 10,000), Nos. 3727-28 (Rs. 1,000), of the Municipal loan of 1878.

No. 7541. *Resolved* : "That, as applied for by the Commissioner, in his memoranda Nos. 15493 and 15494, dated 13th instant, and No. 15375, dated 14th idem, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Rambun...	... Building at Nesbit Road, Byculla.
Mia Saheb Abdulali Mia Saheb Surfali	... Do. at Dadar Road.
Mr. Vithal Purshotum ...	... Do. at Khetwadi 2nd Lane."

Resolved : "That, as applied for by the Commissioner in his memorandum No. 15805, dated this day, sanction be given to the cutting off of water-connections as per list submitted therewith."

No. 7542.

Resolved : "That the following be recorded :—Letter No. 15686, dated 17th instant, from the Commissioner, reporting that he has accepted the tender of Mr. Hari Dharamsi, the lowest of the three tenders received, for landing and conveying, from time to time, machinery in connection with the new engine to be erected at the Love Grove Pumping Station at the rate of Rs. 5 a ton. The total cost, Rs. 1,500, to be met from the contingencies for the work of erecting the new engine."

No. 7543.

Resolved : "That, as applied for by the Commissioner in his letter No. 15421, dated 12th instant, sanction be given to the repairing of about 3,000 sq. ft. of the floor of the distributing basin at Bhandarwada Reservoir being entrusted to the Garlick Indian Patent Stone Company at a cost of Rs. 1,200, to be met from the grant for covering the floor of the basin with the Patent Stone (contingencies)."

No. 7544.

Resolved : "That, as applied for by the Commissioner, in his letter No. 15412, dated 12th instant, sanction be given to the payment of an allowance of Rs. 20 per mensem to the Account Clerk in the Executive Engineer's Office and of a like amount to the senior Drainage Audit Clerk in the Chief Accountant's Office, for additional work to be performed on account of the new works to be carried out at the Love Grove Pumping Station. The cost to be met from the establishment grant for the works.

No. 7545.

"That letter No. 15412, dated 12th instant, from the Commissioner, reporting that Mr. Hale, Inspector of the works, has been allowed to reside in one of the Municipal bungalows at Love Grove, free of rent, be *recorded*."

Considered letter No. 15687, dated 17th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to inform the Standing Committee and Corporation that a further grant of Rs. 16,792 is required, during the current year, to meet the cost of coal for the pumping engines at Love Grove. The consumption of coal from 1st March to 30th September has been 2,053 tons, or at the rate of about 9 tons 11 cwts. per diem. During the rains, *i.e.*, from, say, 1st July to 30th September, the consumption was about 12 tons per diem, and it is not safe to take

the consumption during the fair weather at less than 9 tons per diem. The quantity of water delivered at the Pumping Station since Tansa water was received into the City has been and is more than the present pumping engines can fairly cope with, and from time to time the monsoon sluices at Sonapur and the Mint have to be opened to relieve the sewers.

2. The budget grant was Rs. 44,000, and a sum of Rs. 41,292 has been already spent. Coal to the extent of 1,064 tons will be required up to the end of the year, over and above what has been paid for, and this will cost about Rs. 19,500, taking it at an all-round rate between Rs. 18 and Rs. 18½ per ton. There is a balance of Rs. 2,708 on the sanctioned grant, and deducting this from the above sum, there remain Rs. 16,792, to which I request sanction.

3. The strikes in the coal trade in England have, of course, affected us very prejudicially during the current year, and we have had great difficulty in securing good coal at fair prices. Still the prices have been within budget anticipations. It is the quantity used which has caused the excess. The engines at Love Grove show worse results with every increase in the demand upon them.

4. The state of the Surplus Cash Balance is as under :—

Unappropriated surplus referred to at page 102 of the Administration Report for the year 1891-92			Rs. 5,00,000 0 0
Deduct—			
Amount of grants already sanctioned (excluding temporary advances to be adjusted hereafter)	Rs.	22,342 5 7	
Recommended for sanction	„	3,016 15 10	
			25,359 5 5
Available			Rs. 4,74,640 10 7

I have, &c.,
H. A. ACWORTH, Commissioner.

No. 7546. *Resolved* : "That letter No. 15687, dated 17th instant, from the Commissioner, be forwarded to the Corporation with the recommendation that sanction be given to the payment of Rs. 16,792 out of surplus cash balance to meet the cost of 1,064 tons of coal in excess of the budget provisions for the current year for the pumping engines at Love Grove."

Considered the following :—

No. 2307 of 1892-93.

BOMBAY, *8th October* 1892.

To THE COMMISSIONER.

SIR,—I have the honor to forward for transmission to the Standing Committee a quarterly return for the quarter ending 30th September 1892, as compared with the corresponding quarter for the previous year, as required by the then Town Council's Resolution No. 465 of 1st June 1887, with a list of additional grants sanctioned by the Corporation during the quarter.

2. The unappropriated surplus cash balance, as pointed out in the annual report of this office for the past year, amounts to

Rs. 5,00,000; out of which Rs. 25,405-5-7 have already been sanctioned by the Corporation up to the end of the quarter for additional grants for the current year.—I have, &c.,

SORABJI NAVAROJI COOPER,
Chief Accountant.

No. 15369 of 12*th October* 1892.

Forwarded to the Standing Committee for information.

H. A. ACWORTH,
Commissioner.

Additional grants sanctioned by the Corporation for the Quarter ending 30th September 1892.

No. of Resolution.	Date of Resolution.	Nature of work.	Amount.
			Rs. a. p.
1712	June 6, 1892.	A set of silver plate presented to Mr. Clerk ...	1,250 0 0
2089	„ 9 „	Grant of Rs. 1,418-1-5 from surplus cash balance to meet the cost of providing a new gun-metal bush for the engine of the Carnac Bunder night-soil Pumping Station	1,418 1 5
3315	July 4 „	Grant of Rs. 1,803-4-11 from surplus cash balance, being the amount paid to the Collector of Bombay, in accordance with the order of the High Court, as compensation on account of land acquired under the Land Acquisition Act, from Mr. Vishewnath Damodar, from Mathurabai, widow of Raghoonath Damodar, and from other persons for the low-caste Hindoo Cemetery at Haines Road	1,803 4 11
3316	„ 4 „	Grant of Rs. 2,460-14-0 from surplus cash balance, being the amount of rent due to Government for the 19,687 square yards of ground occupied by the Municipal Work-shops (one pie per square yard, or Rs. 102-8-7 a year), from 9th December 1868 to 8th December 1892	2,460 14 0
5137	Aug. 18 „	Grant of Rs. 1,860 from surplus cash balance to meet the cost of providing 2 masonry and 2 metal ventilating shafts for Queen's Road Sewer	1,860 0 0
5353	„ 22 „	Grant of Rs. 1,000 from surplus cash balance to meet the cost of printing the Proceedings of the House Connection Committee and of the allowance payable to Mr. Gordon, short-hand writer, for taking notes of the evidence given before the Committee	1,000 0 0
5140	„ 18 „	Grant of Rs. 5,408-1-3 to meet the portion of the cost of (*a*) covering of the floor of the distributing basin of the Bhandarwada Reservoir with the Indian Patent Stone, (*b*) to the plastering of a portion of the brick piers in that basin, (c) to the filletting the junction of main walls and piers with the floors, and (*d*) to the payment of the cost of the works	5,480 1 8
		Total Rs....	15,200 5 7

ACCOUNT OF THE BOMBAY MUNICIPALITY

	Budget Estimate.	Quarter ending 26th September 1891.	Quarter ending 30th September 1892.
RECEIPTS.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Balance on 1st April 1892...	16,00,000 0 0	30,871 8 1	89,818 5 6
General Tax	18,48,758 0 0	2,90,107 6 0	3,65,450 14 1
Water Works Revenue (including Water Tax) ...	12,61,300 0 0	3,20,239 7 9	4,12,368 14 1
Wheel Tax and Tolls ...	3,16,312 0 0	50,242 0 8	50,794 4 9
Halalkhor Tax	5,53,000 0 0	1,18,839 9 10	1,46,032 15 1
Duties, Town...	9,00,000 0 0	† 88,879 9 10	† 1,763 5 0
Licenses	70,750 0 0	14,801 14 0	19,606 12 0
Receipts from Govt. for Liquor Licenses.	1,43,750 0 0	.....	.....
„ for Tobacco Duty.	1,80,000 0 0	28,930 0 0	29,311 0 0
Market Receipts	3,33,500 0 0	82,008 11 11	1,00,065 15 0
Miscellaneous Fees	46,500 0 0	10,116 10 2	15,377 4 0
„ Fines and Penalties...	7,000 0 0	3,452 10 7	4,365 1 0
„ Receipts ...	1,08,357 0 0	30,055 1 6	36,169 8 6
„ Savings ...	2,000 0 0	1,863 12 9	.....
Public Gardens	6,290 0 0	1,737 1 10	1,076 9 0
Contribution from Municipal servants towards Pension, &c., Fund	15,000 0 0	4,022 2 8	3,940 12 5
Tramway Rent	36,200 0 0	.....	.....
Interest and Profit on Investments	1,21,600 0 0	3,525 4 0	56,833 14 7
	59,50,317 0 0	8,71,062 3 10	12,39,630 7 6
Debt	.....	32,500 0 0	.....
Bank of Bombay Loan and other Deposit Accounts ...	.....	12,78,800 0 0	21,15,113 15 7
Workshop, Recoveries ...	.....	19,434 8 6	21,353 6 0
Advances	.....	2,85,780 9 3	2,07,707 3
Deposits	.....	47,404 11 0	87,828 6 1
Rupees ...	59,50,317 0 0	25,34,982 0 7	36,71,633 7 3
Total Rupees...	75,50,317 0 0	25,65,853 8 8	37,61,451 12 9

† Debits deducted.

FOR THE QUARTER ENDING 30TH SEPTEMBER 1892.

	Budget Estimate.	Quarter ending 26th September 1891.	Quarter ending 30th September 1892.
DISBURSEMENTS	Rs. a. p.	Rs. a. p.	Rs. a. p.
Superintendence	1,90,436 0 0	50,705 3 2	46,282 2 7
Assessment and Collection Department	2,53,996 0 0	62,503 15 7	64,831 1 1
Fire Brigade...	1,37,930 0 0	27,585 12 1	23,760 4 0
Public Gardens	82,297 0 0	19,880 4 1	19,605 14 8
Public Works Engineer's Dept. — General Supervision Estabt.	41,060 0 0	9,851 0 4	12,134 12 2
Public Works Engineer's Dept. — Drainage	1,93,429 0 0	50,674 0 6	79,331 10 8
Public Works Engineer's Dept. — Water Works	2,97,010 0 0	*3,67,737 7 7	48,493 12 10
Public Works Engineer's Dept. — Streets and Buildings Inspection and Supervision Estabt. ...	87,383 0 0	20,523 3 5	22,560 1 4
Public Works Engineer's Dept. — Public Lighting ...	3,34,379 0 0	60,914 8 2	92,981 7 3
Public Works Engineer's Dept. — Road Watering... ...	82,137 0 0	7,432 9 4	9,576 13 9
Public Works Engineer's Dept. — Road Repairs and Maintenance...	4,57,547 0 0	91,556 9 11	1,04,047 2 5
Public Works Engineer's Dept. — Street Improvements ...	1,05,000 0 0	37,794 13 1	86,906 5 10
Public Works Engineer's Dept. — Cleaning, Lighting and Repairing Port Trust Wharves	37,642 0 0	.....	.....
Health Department... ...	14,21,313 0 0	3,03,242 12 5	3,44,121 1 3
Police Charges	4,00,000 0 0	64,571 5 9	64,571 5 9
Education	87,720 0 0	19,068 0 11	19,602 11 6
Hospitals	60,108 0 0	11,857 11 3	11,761 7 7
Miscellaneous	82,045 0 0	17,203 0 5	17,228 14 8
New Works and Reserve Funds	1,13,268 0 0	79,139 13 10	23,560 2 10
Debt (including Sinking Fund deposited with the Bank of Bombay)... ...	21,68,278 0 0	4,58,830 1 5	5,71,331 3 11
	66,32,978 0 0	17,61,072 5 3	16,62,688 8 1
Loan Works Accounts ...	.....	3,39,506 0 9	4,78,301 6 3
Bank of Bombay Loan and other Deposit Accounts ...	.....	1,00,045 4 0	13,27,761 14 5
Workshops	.....	36,293 4 10	33,865 4 3
Advances	.....	1,94,174 9 10	1,29,485 7 2
Deposits	.....	91,741 3 4	69,750 10 7
Rupees...	66,32,978 0 0	25,22,832 12 0	37,01,853 2 9
Closing Balance ...	.....	43,020 12 8	59,598 10 0
Estimated Balance on 31st March 1893...	9,17,339 0 0	.....	.....
Total Rupees...	75,50,317 0 0	25,65,853 8 8	37,61,451 12 9

* Includes a net sum of Rs. 3,14,776-13-6 paid to date on account of Tansa and other Water Works executed out of Loan Funds and Investment of Surplus Tansa Loan and Interest Funds.

Resolved : "That the following be *recorded* :—Memo-
No. 7547. randum No. 15369, dated 12th instant, from the Commissioner, forwarding report from the Chief Accountant, submitting a return of receipts and disbursements for the quarter ending 30th ultimo, as compared with the corresponding quarter for the previous year."

Considered the following :—

No. 14563 OF 1892-93.

BOMBAY, *30th September* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—I have the honour to forward and request sanction to a list of establishment required for various purposes at the new Municipal Offices. I have reason to believe that for the important post of Electric Engineer we can, by a monthly payment of Rs. 100, obtain the services of Mr. Gill, the Electric Engineer at the Government Dockyard. The Director of Indian Marine has informed me that he has no objection to the arrangement, provided Mr. Gill's duties at the Dockyard are not interfered with, which they will certainly not be. We could not obtain the services of a full-time Electric Engineer under Rs. 500 a month, and as the light at the new buildings will never be used except from 5 or 6 to 7 or 7-30 P.M. according to the season, there is not work for a full-time Engineer, and to engage one would be a wasteful arrangement. The other appointments I think explain themselves. I should be glad if the custodian and hamals had quarters built for them in or in the vicinity of the compound of the building, but this question will be further considered, and, if necessary, be the subject of future proposals. I think the new buildings also deficient in not having any stable accommodation, not only for the horses and carriages of Municipal Officers which exist in the present buildings, but for the horses and carriages of Councillors attending meetings of the Corporation, &c. This subject will probably be brought forward at a future time. The establishment will be required from the 1st February 1893.—I have, &c.,

H. A. ACWORTH, Commissioner.

Electric Lighting.

	Rs.
Engineer	100
Fitter	40
Driver	45
Stoker	18
Oilman and beltman	12

Hydraulic Lift and Fire Service.

Driver for engine and pump	45
Fireman	18
Fitter	45

Drainage and Water Supply.

Plumber	45

General Establishment.	Rs.
Custodian	70
Mukadam of hamals	15
Three hamals on Rs. 10	30
Four hamals on Rs. 9	36
	519

It was agreed that the votes on the different establishments recommended by the Commissioner be taken, one by one, and the votes were recorded as under :—

Electric Lighting.	Rs.		
Engineer	100	*For*	*Against.*
Fitter	40		
Driver	45		
Stoker	18		
Oilman and beltman	12	5	4 *Carried.*
Hydraulic Lift and Fire Service.			
Driver for engine and pump... ...	45		
Fireman	18		
Fitter	45	7	1 *Carried.*
Drainage and Water Supply.			
Plumber	45	5	0 *Carried.*
General Establishment.			
Custodian	70	4	3 *Carried.*

On the motion of Colonel Wilson, seconded by Hurkissondas Narrotumdas, Esq., it was agreed that the Commissioner be asked to ascertain whether a custodian cannot be had for a lesser salary than Rs. 70 per mensem.

	Rs.	*For*	*Against.*
Mukadam of hamals	15	5	3 *Carried.*
Three hamals on Rs. 10	30	5	0 *Do.*
Four hamals on Rs. 9	36	5	1 *Do.*

The proposal as thus amended was passed as follows :—

No. 7548.

"That, as applied for by the Commissioner, in his letter No. 14563, dated 30th ultimo, the Corporation be recommended to sanction the following establishment from 1st February 1893 for service in the new Municipal Offices :—

Electric Lighting.	Rs.	
Engineer	100	per mensem.
Fitter	40	"
Driver	45	"
Stoker	18	"
Oilman and beltman	12	"
Carried forward...	215	

		Rs.	
	Brought over...	215	
Hydraulic Lift and Fire Service.			
Driver for engine and pump ...		45	per mensem.
Fireman		18	"
Fitter		45	"
Drainage and Water Supply.			
Plumber		45	"
General Establishment.			
Custodian		*70	"
Mukadam of hamals		15	"
Three hamals on Rs. 10		30	"
Four hamals on Rs. 9		36	"
		519	

Resolved : "That the following be *recorded* :—Memo-
No. 7549. randum No. 15367, dated 12th instant, from the Commissioner, reporting, with reference to the resolution of the Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 38,925-12-2 from the surplus cash deposit account to the Municipal General Fund pass-book, on 8th instant."†

The following statement ‡ was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 16th October 1892.

Resolved : "That, as applied for by the Commissioner,
No. 7550. in his letter No. 15814, dated this day, sanction be given to the acceptance by him of the tender of Mr. Pirojsha Dhanjibhai Patel, the lowest of 4 tenders received, for the construction of Engineer's quarters and outhouses at the Love Grove Pumping Station at a cost of Rs. 10,590·235 to the debit of the grant of Rs. 12,005 for the work."

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* Subject to modification as above.

† The Chief Accountant reports that the balance standing to the credit of the above account after effecting the transfer is as under :—

In Cash	...Rs.	44,094 12	0
In 4 per cent. Government paper for Rs. 4,33,000...	... "	4,81,700 5	0
In 5 per cent. Municipal Debentures at par ...	... "	17,66,500 0	0
	Rs.	22,42,295 1	0

‡ *See* Appendix B.

BOMBAY, *26th October* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M. ; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATIAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; KAIKHOSRO N. KABRAJI, Esq. ; K. M. SHROFF, Esq.; A. G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., I.C.S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 18th instant, were signed.

No. 7731. No. 7732. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Mistri, Bhedwar & Co. for the construction of latrines and urinals at Mumbadevi Road and Jakeria Musjid Street, and (2) with Messrs. Behramji Jehangir & Co. for paving footpaths with blue trapstone in different parts of the city.

No. 7733. *Resolved* : " That, as applied for by the Commissioner, in his memoranda Nos. 15891, 15892 and 15893, dated 19th instant, and No. 16036, dated 24th idem, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Cowasji Nowroji Gheewalla...	Building at Babula Tank Road.
Bai Fatmabai, widow of Abdool Rehman Zardee ...	Do. at Bapty Road.
Mr. Sunwar Sukar Patel	Do. at Bhoewada Road.
„ Kashinath Deoji Dhooroo ...	Do. at Hasali Tank."

No. 7734. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 16257, dated this day, sanction be given to the cutting off of water-connections as per list submitted therewith."

No. 7735. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 15701, dated 17th instant, and instead of the work being done departmentally at a larger cost, sanction be given to the fixing of 3,000 running feet or thereabout of kerb-stones at the side of foot-paths by Messrs. Hiraji, N. Spencer & Co., the contractors for table-stones and kerbing of foot-paths to be paved with Indian patent stone; at the rate of Rs. 50 per 100 r. ft. complete. The amount to be paid out of the

road repairs grant, Rs. 45 per 100 r. ft., being debited to item 1 D, road repairs and maintenance, and Rs. 5 per 100 r. ft. to item No. 2, labour.*

Considered letter No. 16041, dated 24th instant, from the Commissioner, to the Secretary, as under :—

SIR,—Referring to the resolution of the Standing Committee No. 4961, dated the 17th August last, I have the honour to state that the application to the Chief Judge of the Small Causes Court for the recovery of the expenses incurred in repairing Zaoba's oart came on for disposal on the 22nd ultimo, and the result was that the application was dismissed, on the ground that we were unable to adduce satisfactory evidence to show that the passage in question was a private street within the meaning of the section 305 of the Municipal Act.

2. The total cost of repairing the oart amounts to Rs. 4,396-7-8, but of this Rs. 67-10-4 have already been recovered.

3. I request the favour of the sanction of the Standing Committee and Corporation to the writing off of the balance of Rs. 4,328-13-4 out of commission account, crediting the balance of commission account to revenue.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 7736. *Resolved* : "That letter No. 16041, dated 24th instant, from the Commissioner, be forwarded to the Corporation with a recommendation that sanction be given to the writing off of Rs. 4,328-13-4 out of commission account, being the difference between the cost (Rs. 4,396-7-8) of repairing Zaoba's oart and the sum actually recovered on this account from private house-owners, Rs. 67-10-4.

"That the Corporation be further recommended to sanction the balance that may remain available under commission account,† after writing off out of that account the above sum, and the amount sanctioned previously to be written off on account of the Bandora Municipality, being credited to revenue."

No. 7737. *Resolved* : "That memorandum No. 16035, dated 24th instant, from the Commissioner, requesting the Committee to recommend the Corporation to sanction the writing off, from the book value of the dead stock return of the various departments of the Municipality, of Rs. 33,501-10-10 as loss by auction, &c., be circulated and brought on for consideration at a future meeting."

* The Commissioner agreed that in future he will supply the names of the streets, the foot-paths of which are to be paved.

† *See* page 179 of the Commissioner's Administration Report for 1891-92.

Resolved : " That, as applied for by the Commissioner, in his letter No. 15924, dated 19th instant, the Corporation be recommended to sanction the writing off of Rs. 16-10-11 from the dead stock return of the drainage department, being the difference between Rs. 24-2-11, the cost price of 20 r. feet of 12" stoneware pipes, and the reduced rate of annas six per running foot for cracked pipes issued to the Health Department for laying under cutchra deposits and roads on the Flats for carrying off storm-water."

No. 7738.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 15694, dated 17th instant, the Corporation be recommended to sanction the writing off (1) of Rs. 488-9-7 from the live stock return of the Fire Brigade Department, being the book value (Rs. 250) of one mare that died and the difference between the book value (Rs. 250) and the sale proceeds, Rs. 11-6-5, of a horse sold by public auction during the quarter ending 31st August 1892; (2) of Rs. 98-6-3 from the live stock return of the Market Department, being the book-value of one bullock that was destroyed on account of a broken horn during the same quarter; and (3) of Rs. 2,198-3-4, being the book-value of one horse that was sent to Pinjrapole and 30 bullocks* that died and one bullock that was destroyed owing to the fracture of shoulder, during the same quarter."

No. 7739.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 16037, dated 24th instant, sanction be given to the transfer of Rs. 261-9-5 from savings in the Public Health Department, Conservancy branch, I, superintendence and inspection, to same department, Mahaluxmi Dhobiwada, 4, repairs, to meet the cost of renewing the water service pipe of the Mahaluxmi Dhobiwada, as the same is worn out."

No. 7740.

Read letter No. 16145, dated 24th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to forward for sanction an estimate amounting to Rs. 46,200 from the Executive Engineer for the repair of Gibbs Road together with a report on the subject from that officer. The amount can be met from surplus cash balance.

* Causes of death :—1, inflammation of the heart; 12, old age and general debility; 1, disease of horn; 1, disorder of lungs and spleen; 1, gangrene of lungs and liver; 2, flatulent colic; 1, disorder of liver; 1, foot and mouth disease; 1, fracture of fetlock bone; 1 pneumonia, 1, tuberculosis; 1, congestion of brain; 1, abcesses in right lung; 5, inflammation of heart, lungs, &c.

I have given orders for the commencement of work in anticipation of sanction, as it is obviously one that cannot be deferred and that must be undertaken.

The state of the surplus cash balance is as under :—

Unappropriated surplus referred to at page 102 of the Administration Report for the year 1891-92... ...			Rs. 5,00,000	0 0
Deduct—				
Amount of grants sanctioned excluding temporary advances to be adjusted hereafter	Rs.	22,342 5 7		
Recommended for sanction	„	19,808 0 0		
			42,150	5 7
Available ...			Rs. 4,57,849	10 5

I have, &c.,
H. A. ACWORTH, Commissioner.

No. B 7322 OF 1892-93.

30th September 1892.

TO THE COMMISSIONER.

SIR,—Referring to your No. 13154, dated 13th September 1892, I have the honour to make the following report on the recent subsidence of Gibbs Road.

Late in the evening of Thursday, the 1st September, some cracks were noticed on the spot and watchmen were stationed there throughout the night. The first serious step occurred at about 4 a.m. on Friday, the 2nd September, rendering the road impassable for traffic. Barriers were at once put up across the road and watchmen stationed there; one barrier being near the Malabar Hill Reservoir, one near Messrs. Kemp & Co.'s in Gowalia Tank Road. Further subsidence was gradual and the greatest subsidence is 10 feet in vertical height. This occurs between the distances of 100 feet and 190 feet north of the viaduct. The whole of the subsidence extends from the north end of the viaduct to a length of 320 feet downwards and northwards. The viaduct and also the retaining wall on the west side of the road have remained perfectly sound. The breast or surcharged wall at the foot of the slope on the east side of the road has both sunk downwards and slipped forwards towards the east and, though cracked, yet no part of it has actually fallen. This wall and the embankment of the road were constructed at the end of 1878 and have remained sound up to the time of the present subsidence. The cause of subsidence is the abnormal saturation of the bank and the ground below by the heavy rains which this year have occurred towards the end of the season. Equally heavy and continuous rains have occurred in other years, but they have come at an earlier period of the season, when the ground was much drier and more capable of absorption. The saturation of the ground this year has been so excessive as to render it spongy to a remarkable degree.

The weight of the embankment has caused the ground to spew up and forwards towards the east and forming earth waves extending as far as 150 feet from the centre of the road. A small

portion of the subsidence has been made up and a fence erected sufficient to allow of the safe passage of persons on foot up and down the road. The Deputy Executive Engineer, Water Works, will of course report to you what has been done as regards the water mains. My first idea in respect of remedying the damage that has occurred, and permanently sustaining the road, was to build a retaining wall of the full height above the sidelong ground to the east, seeing how well has stood a similar retaining wall built in March 1889 on the east side of a lower part of the road. I found, however, that a retaining wall of the full height would be extremely costly involving a greater outlay than I considered I should be justified in recommending. I am of opinion that a wall built upon a solid foundation is indispensable unless a similar subsidence in the future is to be risked. I have considered the effect of placing such a wall at various distances from the road towards the east and have found that the position shown on the accompanying plans—Nos. 560, dated 18th October 1892, and 561, dated 18th October 1892—is the best that can be fixed upon, having regard both to efficiency and economy. The slope which was formerly about $1\frac{1}{2}$ to 1, I propose to make $2\frac{1}{4}$ to 1, and to build a breast wall at a distance generally of about 58 feet from the present breast wall. The wall will be 8′ 9″ above the present surface of the ground at its highest part except where it will run up against the abutment of the viaduct. The depth at which a satisfactory foundation for the wall may be obtained is an element of some uncertainty. I have had trial pits excavated, and judging from what they have revealed, I have assumed that the excavation required will be about 15 feet below the present surface, and I trust this will be sufficient to ensure stability. The accompanying estimates, No. 518, dated 18th October 1892, shows the anticipated cost of the work to be Rs. 46,200, including a provision of 10 per cent. for contingencies. It will be observed that an item has been entered in the estimate to provide for the acquisition of the additional ground required for the work and for a pathway beyond. I consider a pathway to be very essential in order that the Municipal officers may have a right of access to the face of the wall for purposes of inspection and the destruction of injurious vegetation.

The accompanying letters, noted in the margin, will show the correspondence which has taken place between the Secretary of the Parsee Punchayet and myself on the subject of the ground belonging to the Punchayet required for the purposes of the work.

This office No. B. 6780, dated 15th September 1892, to the address of the Secretary.
Telegram dated the 16th September 1892, from the Secretary, Parsi Punchayet.
This office No. 6849, dated 20th September 1892, to the address of the Secretary.

While the rains lasted it would have been hazardous to proceed with the remedial work, as there would have been great risk of a further slip, and when the excavations were first commenced with your verbal sanction, the ground was so sodden that the bottom of the trench spewed up when left for a few hours. There has been no rain for some time and the weather seems to have permanently changed.

The sun playing upon the earth will have a drying effect, improving its condition day by day and in the interest of public convenience the works are being proceeded with. I would beg the favour of your formal sanction to the execution of the work.—I have, &c.,

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer.

ESTIMATE No. $\frac{152\text{-}80}{118\text{-}91}$ OF 1892.

Framed by the Executive Engineer, Municipality, of the probable cost of filling up the subsidence of Gibbs' Road from the Viaduct northwards and building new breast wall.

Quantity.	Item.	Rate.	Per	Amount.		Total.
		Rs. a. p.		Rs.	cents.	Rs. a. p.
61,179 c. ft.	General excavation ...	3 0 0	100 c. ft.	1,835	·37	
33,201 „	Common lime concrete laid complete	18 0 0	„	5,976	·18	
35,203 „	Uncoursed rubble masonry in foundation and superstructure (lime and sand) 1 to 1.	20 0 0	„	7,040	·60	
260.901 „	Filling in...	3 0 0	„	7,827	·03	
2,142 „	Dry rubble wall... ...	9 0 0	„	192	·78	
10,710 s. ft.	Dry rubble packing 6′ thick	5 0 0	100 s. ft.	535	·50	
3,213 „	Pointing to rubble work with cement and sand (1 to 1)...	10 0 0	„	321	·30	
26,460 „	Removing and resetting the existing pitching..	6 0 0	„	1,587	·60	
10.710 „	Metalling 9″ thick ...	9 0 0	„	963	·90	
4,284 „	Making temporary road .	5 0 0	„	214	·20	
340 r. ft.	Blue stone kerbing, 15″ deep × 6″ × 12″ ...	50 0 0	100 r. ft.	170	·00	
340 „	Blue stone water tables, 6″ deep × 18″ wide ...	48 0 0	„	163	·20	
121 „	Masonry drain built complete	10 0 0	„	1,210	·00	
357 „	Removing and refixing gas main	0 12 0	„	267	·75	
630 „	4″ cast iron pipes as weep holes	1 0 0	„	630	·00	
4 No.	Removing and refixing lamp posts	10 0 0	Each.	40	·00	
2 „	Removing and refixing telephone posts ...	10 0 0	„	20	·00	
2,600 s.yd.	Extra land required ...	5 0 0	s. yd.	13,000	·00	
				41,995	·41	
	Add—10 per cent. for contingencies...			4,199	·54	
				46,194	·95	
			Grand Total say ... Rs....			46,200 0 0

JAMES W. SMITH,
Acting Executive Engineer.

Resolved: "That, as applied for by the Commissioner, in his letter No. 16145, dated 24th instant, and in continuation of the resolution of the Committee, No. 7090, dated 5th idem, the Corporation be recommended to sanction the payment of Rs. 46,200 from surplus cash balance to meet the cost of reconstructing that portion of Gibbs' Road which subsided during the last rains."

No. 7741.

Resolved: "That, as applied for by the Commissioner, in his letter No. 15704, dated 17th instant, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Mr. Hajeebhai Dosabhai for the recovery of Rs. 33, being the amount of tax due by him on vehicles and animals for the 3rd and 4th quarters of 1889-90 and 1st quarter of 1890-91."

No. 7742.

Resolved: "That the following be referred to the Commissioner for favour of remarks:—Resolution of the Corporation, No. 7713, dated 24th instant, as under:—'That the proposal for purchase of a steam engine for flushing sewers be referred back to the Standing Committee for report as to the size, capacity and cost of the engine, and cost of the staff for working it; also as to the probable length and number of gullies which the engine would flush daily.' That the Commissioner be asked to report as to the feasibility of providing automatic flushers at the head of gullies."

No. 7743.

Resolved: "That the following be *recorded*:—Memorandum No. 15702, dated 17th instant, from the Commissioner, forwarding letter No. 2380, dated same day, from the Chief Accountant, reporting that a lot of 4 per cent. Government paper (Rs. 1,00,000) belonging to the 35 lakhs various Sanitary Works loan deposit account was sold on the 15th idem at $106\frac{11}{16}$ per cent. against the cost price of $103\frac{5}{16}$ per cent."

No. 7744.

Resolved: "That memorandum No. 16038, dated 24th instant, from the Commissioner, forwarding Counsel's opinion on the question of the legal position of the Standing Committee as regards calling for reports, &c., be printed and considered at the next meeting of the Committee."

No. 7745.

Resolved: "That the following be *recorded*:—Memorandum No. 15782, dated 17th instant, from the Commissioner, reporting that there was no

No. 7746.

case of burst on the Tansa Line during the week ending 15th idem."

No. 7747.

Resolved: "That the following be *recorded* :—Memorandum No. 15781, dated 17th instant, from the Commissioner, forwarding letter No. 2391, same date, from the Chief Accountant, reporting, with reference to the resolution of the Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 1,62,827-0-3 from the following deposit accounts to the Municipal General Fund Pass-book :—On the 12th idem—(*a*) of Rs. 10,196-2-3 from the Tansa Loan deposit account No. 1 ; (*b*) of Rs. 4,244-10-0 from the Agripada house sullage connections loan deposit account; (*c*) of Rs. 96-14-0 from the 44 lakhs Sanitary Works loan deposit account ; (*d*) of Rs. 2,996-3-0 from the 7 lakhs Sanitary Works loan deposit account ; (*e*) of Rs. 44,094-12-0 from the surplus cash deposit account ; (*f*) of Rs. 1,198-7-0 from the 27 lakhs Drainage and Water Works loan deposit account ; and on the 15th idem (*g*) of Rs. 1,00,000 from the 35 lakhs various Sanitary Works loan deposit account. Stating, with reference to the Committee's resolution No. 5620, dated 9th January 1889, that the following transfers were made from one invested fund to another, *viz.*, on 13th instant, from the surplus cash deposit account to the 5 per cent. Municipal Loan Sinking Fund deposit account, 5 per cent. Municipal debentures for Rs. 15,500, and on the 14th instant, from the following deposit accounts to the surplus cash deposit account:—(*a*) Tansa Loan Deposit Account No. 1, 5 per cent. Municipal debentures for Rs. 2,65,000 ; (*b*) Agripada house sullage connections loan deposit account, 5 per cent. Municipal debentures for Rs. 1,00,000 ; (*h*) Municipal Building Fund. deposit account, 5 per cent. Municipal debentures for Rs. 2,50,000."

No. 7748.

Resolved: "That the following be forwarded to the Commissioner for favor of remarks :—Memorandum from the Municipal Secretary, for-

* The Chief Accountant reports that the balance standing to the credit of the above accounts, after effecting the said transfers, are as under :—

(*a*) *Nil.* (*b*) In 5 per cent Municipal debentures for Rs. 70,000 at par. (*c*) In 4 per cent. Government Paper for Rs. 6,20,000 = Rs. 6,06,808-8-3. (*d*) In 5 per cent. Municipal debentures for Rs. 1,20,000 at par. (*e*) In 5 per cent. Municipal Debentures for Rs. 23,66,000 at par, and in 4 per cent. Government Paper for Rs. 4,33,009 = Rs. 4,31,700-5-0. Total Rs. 27,97,700-5-0. (*f*) In 5 per cent. Municipal debentures for Rs. 48,000 at par. (*g*) In 4 per cent. Government paper for Rs. 13,54,100= Rs. 13,06,554-4-0 in cash, Rs. 7,148-7-0 in cash ; and (*h*) in 5 per cent. Municipal debentures for Rs. 5,50,000 at par.

warding petition addressed to the Corporation by Mr. Sittaram Luxmon on the subject of damage done by him as Drainage Contractor to a building at Haines Road, Agripada House connection district."

No. 7749. *Resolved* : "That, as recommended by the Secretary, sanction be given to 13 days' casual leave being allowed to Mr. Ramchunder Makundjee, Head Clerk, Standing Committee and Corporation Office, from the 19th instant."

The following return was read and *recorded* :—

No. 7750. Return of fires at Memonwada Road, 400, Duncan Road, Bellasis Road, Arthur Road, Dharavi Road (Mahim), Girgam Back Road, Falkland Road, Parel Road and Abdool Rahiman Street, forwarded with the Commissioner's memoranda Nos. 15753 and 16086, dated 17th and 24th October 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 23rd October 1892.

No. 7751. *Resolved* : "That the following be forwarded to the Commissioner for disposal in continuation of the resolution of the Committee No. 1459, dated 18th May last, and that the applicants be informed accordingly."—Letter, dated 24th instant, from Messrs. Pandurang Nilaji and A. Gomes, on the subject of improving the water supply of lower Mahim.

No. 7752. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 16223, dated 25th instant, sanction be given to the acceptance by him of the tender of Mr. Sayaji Naguji, the lowest of the six tenders received for the work of filling in Sankli Tank."

"The amount Rs. 60,32,638 to be paid out of the loan for the construction of Fire Brigade Quarters."

No. 7753. *Resolved* : "That the following be forwarded to the Commissioner for disposal and that the applicant be informed accordingly."—Letter, dated 25th instant, from Mr. Nanabhoy Jamsetji, on the subject of the nuisance caused by the overflow of the gutters, situated near his property at Tank Bandar, Mount Road.

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* *See* Appendix C. † *See* Appendix B.

Resolved : "That, as applied for by the Commissioner, in his letter No. 16191, dated 25th instant, sanction be given to the variation of Mr. Sitaram Laxumon's contract for the construction of pipe sewers along Victoria Cross Lane, &c., whereby he shall be paid at the rate of Rs. ·68 per running foot of 6″ stoneware pipes laid complete instead of Rs. ·62 per r. ft.

No. 7754.

"The excess of Rs. 4,639-0-8 to be paid out of the loan allotment Rs. 2,48,000 for the Agripada House Sullage B. connection work."

Considered list of outstanding business (1st Oct. 1892). Item No. 4.

"The Commissioner asked to obtain and submit to the Committee, as early as practicable, the opinion of the Advocate-General on the following question, *viz.* :— Whether the Standing Committee has the right to call for reports from the Commissioner, and, through him, from other Municipal officers—(1) on matters falling within the powers and functions of the Committee ; (2) on matters which come before the Committee for consideration, proposal or report, either on reference by the Corporation or at the instance of the Commissioner ; and (3) generally as to the right of the Standing Committee to call for reports, information, returns, &c., from the Commissioner and other Municipal officers."

Struck out, the opinion having been placed before the Committee this day.

BOMBAY, *2nd November* 1892.

AT the Meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.

THE HON'BLE MR. FAZULBHOY VISRAM ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; KAIKHOSRO N. KABRAJI, Esq. ; K. M. SHROFF, Esq. ; ACCACIO G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., I.C.S., Commissioner ; the CHIEF ACCOUNTANT ; and the SECRETARY.

The minutes of the Meeting held on the 26th ultimo, were signed.

The seal of the Corporation was affixed to deeds of contract—

(1). With Garlick's Indian Patent Stone Company, for repairing the floors and pillars of the distributing basin of the Bhandarwada Hill Reservoir ;

(2). With Mr. Mahomedally R. Bhaijibhai, for shifting and relaying Tansa Water 48″ mains at Kurla Creek ;

(3). With Messrs. Richardson & Cruddas, for the construction of shed for the pipe-cutting machine at Chinchpokli.

The seal was also affixed to deed of agreement with Mr. Beiramji Nowroji for the leasing of portions of his premises, Hornby Road, as a Fire Brigade Station.

No. 8056. *Resolved* : " That, as applied for by the Commissioner, in his memoranda Nos. 16159, 16160, and 16161, dated 25th ultimo, sanction be given under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Shanker Swamee Brahmachary..	Building at Walkeshwar Sonapur.
„ Dayanund Brahmachary ...	Do. at do.
„ Gocro Maharaj	Do. at do. "

No. 8057. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 16775, dated this day, sanction be given to the cutting off of water-connections as per list submitted therewith."

No. 8058. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 16035, dated 24th October 1892, the Corporation be recommended to sanction the writing off, from the book value of the dead stock return of the various departments of the Municipality, of Rs. 33,501-10-10 as loss by auction sale and otherwise of unserviceable and other stores as per statements submitted with the above memorandum."

No. 8059. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 16638, dated 31st October 1892, and subject to the approval of the Corporation, under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 2,870 from the provision of Rs. 1,00,000 for minor works included in the allotment for the duct from the Tansa dam to Ghatkupar, to the allotment for the duct from Ghatkupar to Bombay, to meet the amount of Mr. Mahomed Ali Rahimtula Bhaijibhoy's bill for shifting and relaying 48″ pipes at Kurla Creek."

No. 8060. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 16603, dated 31st October 1892, sanction be given to the employment of 8 sluicemen, on Rs. 10 a month each, from 1st

November 1892 to 28th February 1893, in connection with the proposals made for slightly reducing the water supply to sewers and for opening the sluices on the ebb tide at Sonapur and the Mint. That sanction be also given to the employment of 6 extra sluicemen on Rs. 10 each a month from 1st to 6th instant, at Love Grove sluices, to allow of the sluices being entirely closed at certain tides. The amount Rs. 332 to be debited to savings in section I, establishment, C, maintenance of sluices."

No. 8061. *Resolved* : "That, subject to the sanction of the Corporation being given to the outlay for the re-construction of part of Gibbs Road, and as applied for by the Commissioner, in his letter No. 16585, dated 31st October 1892, sanction be given to the following work forming part of the re-construction being entrusted to Messrs. Littlewood & Co. at a cost of Rs. 8,000.

(1)	Filling in with morum. Payments to be made on sectional measurements after consolidation by the Executive Engineer's Department ...	Rs.	2 14	per 100 c. ft.
(2)	Headers 2′ to 2′-3″ long	„	50 0	per 100 No.
(3)	Headers 2′ 6″	„	60 0	do.

"That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary as the work is urgent and the rates are lower than those given by other parties. The cost to be debited to the grant of Rs. 46,200 when sanctioned by the Corporation for the re-construction of the road."

No. 8062. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 16602, dated 31st October 1892, the Corporation be recommended to sanction the employment of the following establishment from 1st November 1892 to 28th February 1893, for the purpose of supervising certain minor works on the Tansa Duct Line, *viz.* :—

1	Inspector	Rs.	90	per mensem.
4	Maistries at „ 40 each ...	„	160	„
2	Do. at „ 35 „ ...	„	70	„
3	Do. at „ 30 „ ...	„	90	„
7	Linemen at „ 10 „ ...	„	70	„
16	Watchmen at „ 10 „ ...	„	160	„
9	Lascars at „ 10 „ ...	„	90	„
2	Lascars for bridges at „ 17 „ ...	„	34	„
		Rs.	764	per mensem.

For 4 months from 1st November 1892 to 28th February 1893...Rs. 3,056

"The cost to be debited to savings in the provision for Tansa Establishment already sanctioned.

"That the Corporation be further recommended to sanction the continuance during the same period of the establishment in the Chief Accountant's Office required to audit the accounts of these works, at a monthly cost of Rs. 80 (for 4 months Rs. 320). The cost to be met from savings as above."

No. 8063. *Resolved*: "That, with reference to the Commissioner's memorandum No. 16239, dated 26th October 1892, the Corporation be recommended to sanction the grant of Rs. 540, from surplus cash balance, to meet excess in the grant for Printing (including Annual Report and advertisements, Section III, Municipal Commissioner's Personal Office Establishment), consequent on the printing of the Municipal servants' list and Building By-laws."

No. 8064. *Resolved*: "That the consideration of memorandum No. 16038, dated 24th October 1892, from the Commissioner, forwarding Counsel's opinion on the question of the legal position of the Standing Committee as regards calling for reports, &c., be postponed."

No. 8065. *Resolved*: "That the following be forwarded to the Commissioner for disposal and that the applicant be informed accordingly: Letter No. 28, dated 31st October 1892, from Mr. Pandurang Vishnu Abhyankar, regarding the drainage of his property at Sleater Road."

No. 8066. *Resolved*: "That the following be *recorded*—Memorandum No. 16158, dated 25th October 1892, from the Commissioner, reporting that there was no case of burst on the Tansa Line during the week ending 22nd idem."

No. 8067. *Resolved*: "That the following be forwarded to the Commissioner for favour of remarks:—Resolution of the Corporation, No. 7930, dated 27th October 1892, as under:—

"That the question of the provision of experimental life preserving apparatus for wells and tanks be referred to the Commissioner and the Standing Committee for report and an estimate of the cost of the same."

No. 8068. *Resolved*: "That the following be forwarded to the Commissioner for favour of remarks :— Resolution of the Corporation, No. 7935, dated 27th October 1892, as under :—

"That Government Resolution No. 1876, P. W. Department (Railway), dated 26th September 1892, on the subject of the construction of overbridge at Falkland Road, be forwarded to the Standing Committee and the Commissioner in continuation of the Corporation's Resolutions No. 7369, dated 8th October 1891, and No. 3814, dated 14th July 1892."

No. 8069. *Resolved*: "That the following be forwarded to the Commissioner for favour of remarks:— Resolution of the Corporation, No. 7936, dated 27th October 1892, as under :—

"That letter No. 14461, dated 29th September 1892, from the Commissioner, be forwarded to the Standing Committee with a view to their recommending to the Corporation the source from which the amount of the difference (Rs. 900) should be provided, between the forfeit payable by the contractors for the new Municipal Office buildings, for non-completion within the contract time (Rs. 400 a week) and the amount payable to the owners of the present Municipal Building (Rs. 625) a week."

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 30th October 1892.

The Budget Estimates prepared by the Commissioner were presented, and it was resolved that the consideration of the same be postponed till the next meeting.

Read letter No. 16727, dated 1st instant, from the Commissioner to the Secretary as under :—

SIR,—I have the honour to state that there is a plot of vacant ground measuring 311·12 square yard between houses Nos. 19 and 25, Pinjrapole Street, belonging to Abdul Hussein Adumbhai, Mahomedali Lakmanji, Tayabally Lakmanji, Abdul Hussein Lakmanji, Nanabhai Kikabhai and Abdulali Shaik Mahomed, and a plan for erecting a building thereon has been received. Its position is very suitable for the erection of a public latrine, and I desire, at the Health Officer's request, to take up the land for the purpose. But as it cannot be acquired, by private negotiation, I request,

* *See* Appendix B.

under section 91 (1) of the Act, the favour of the sanction of the Standing Committee to the same being acquired under the Land Acquisition Act.

2. The cost of the land (estimated at Rs. 15 per square yard, including 15 per cent. for compulsory acquisition and 5 per cent. for contingencies, to amount to Rs. 5,600·16) to be met from Surplus Cash Balance. The state of the Surplus Cash Balance is as follows:—

Unappropriated surplus referred to at page 102 of the Administrative Report for the year 1891-92.	Rs.	5,00,000	0	0
Deduct—				
Amount of grants sanctioned, excluding temporary advances to be adjusted hereafter ...	„	22,367	5	7
Recommended for sanction...	„	66,008	15	10
	Rs.	88,376	5	5
	Available Rs.	4,11,623	10	7

I have, &c.,
H. A. ACWORTH, Commissioner.

No. 8071. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 16727, dated 1st instant, the Committee approve, under the terms of section 91 (1) of the Municipal Act, of application being made to Government for the taking up, under the Land Acquisition Act, of 311·12 square yards or thereabout of vacant land situate at Pinjrapole Street, and shown in yellow on the plan marked A, dated this day, and filed in supplement to minute books, the property of Messrs. Abdul Hussein Adumbhai, Mahomed Ali Lakmanji, Tyabally Lakmanji, Abdul Hussein Lakmaji, Nanabhai Kikabhai and Abdul Shaik Mahomed, the same being required as site for a public latrine thereon.

" That the Corporation be recommended to sanction payment from the Surplus Cash Balance of the cost of the land at the rate of Rs. 15 per square yard, plus 15 per cent. for compulsory acquisition and 5 per cent. for contingencies aggregating Rs. 5,600·16."

No. 8072. *Resolved* : " That the following be forwarded to the Commissioner, for favour of remarks and that the applicants be informed accordingly :—

Letter, dated 1st instant, from Messrs. Mulji and Raghooji on behalf of their clients Messrs. Ruttonsey Poonsey and Malsi Assu, Trustees of the Visa Oosmal Temple at Dongree Street, on the subject of the water rate chargeable to the said temple."

Read the following :—

No. 16702 OF 1892-93.

RETURNED.—The petitioners were removed by the Police and, as I believe the Advocate-General has held, were legally removed. The Municipal Commissioner has nothing whatever to do with the matter. As far as providing them with another site is concerned, the Commissioner is making enquiries, but is doubtful of the possibility of obtaining one at any moderate price.

H. A. ACWORTH, Commissioner.

1st *November* 1892.

Proposed by Kaikhosro N. Kabraji, Esq., seconded by K. M. Shroff, Esq.—

No. 8073. "That the Commissioner be requested to lay on the table all the papers in his possession regarding the question of the petition from dealers and hawkers of country-made shoes."

Carried.

It was agreed to proceed with the consideration of the budget estimates on Friday the 11th instant, at 3 P.M., and that the next meeting of the Committee be held accordingly, instead of on the 9th.

BOMBAY, 11*th November* 1892.

AT the Meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; the CHIEF ACCOUNTANT; and the SECRETARY.

The minutes of the meeting held on the 2nd instant, were signed.

The seal of the Corporation was affixed (1) to deed of agreement (in duplicate) between Mr. Khimjee Luckmidas and the Corporation, securing to the Municipality the right to acquire at any future time the set-back of property situated at Nos. 51-53, Manordas Street, without payment of any compensation in respect of the unauthorised work, indicated on the plan annexed to the deed, and at the rate of Rs. 25 per square yard, for any land shown on the plan and coloured yellow to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition; and (2) to deed of

agreement between Mr. Dhunjeebhai Byramjee Cooper and the Corporation, ditto, ditto, at No. 70, Sonapur Lane, ditto, ditto, and at the rate of Rs. 10 per square yard for any land shown on the plan scored red to be there taken up after 10 years from the 19th September 1891, inclusive of any loss, damage or expense sustained by him by reason of such acquisition.

The seal was also affixed to deed of contract with Messrs. Heptula Sheikh Adam & Co., for the supply of 2,000 cases kerosine oil at the Municipal Store Depôt, Bellasis Road Bridge, at the rate of Rs. 3-12-0 per case.

The seal was also affixed (1) to 4 attested duplicate debentures of the Bombay Municipal Sanitary Works Loan of 1885, Nos. 439 N. N., 440 N. N. 577 N. N., 578 N. N., of Rs. 500 each ; (2) to 1 attested duplicate debenture of the Tansa Water Works Loan, No. 3392 of Rs. 500 ; (3) to 18 consolidated debentures of the Municipal Loan of 1878, Nos. 1606-13 of Rs. 4,000, Nos. 1710-17 of Rs. 4,000, Nos. 2061-70 of Rs. 5,000, Nos. 2071-80 of Rs. 5,000, Nos. 2081-90 of Rs. 5,000, Nos. 2091-100 of Rs. 5,000, Nos. 2101-10 of Rs. 5,000, Nos. 2111-20 of Rs. 5,000, Nos. 2121-8 of Rs. 4,000, Nos. 2134-53 of Rs. 10,000, Nos. 2154-73 of Rs. 10,000, Nos. 2194-213 of Rs. 10,000, Nos. 2214-33 of Rs. 10,000, Nos. 2437-8 of Rs. 1,000, Nos. 2952-61 of Rs. 5,000, Nos. 3647-66 of Rs. 10,000, Nos. 3667-86 of Rs. 10,000, Nos. 3707-26 of Rs. 10,000 ; (4) to 1 consolidated debenture of the Tansa Water Works Loan, Nos. 5235-6, of Rs. 1,000 ; and (5) to 1 consolidated debenture of the Drainage and Water Works Loan of 1888, Nos. 2075-84 of Rs. 5,000.

Resolved : "That, as applied for by the Commissioner, in his memoranda Nos. 16763 and 17022, dated 2nd and 7th instant, sanction be given under section 351 (2) of the Municipal Act to the removal of the following structures built without permission :—

No. 8442.

Names of owners.	Where.
Mr. Ayodhyalal Bachoolal ...	Building at Mustan Tank Road.
Messrs. Zinabhai Koopchund & Co.	Do. at Old Race Course.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 17397, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 8443.

No. 8444. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 17056, dated 7th instant, and subject to the approval of the Corporation, under section 133 (2) of the Act, sanction be given to the transfer of Rs. 912 from savings in section I, establishment (inspection, distribution and waste prevention), Water Works, Engineer's Budget, to same section (Tansa Establishment Duct), same head, same budget, to meet the cost of staff of sluicemen for Tansa Water Works, from November 1892 to February 1893, as per detailed statement submitted."

No. 8445. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 17059, dated 7th instant, and under the Pension rules, sanction be given to the payment of a compassionate allowance of Rs. 219-10-0 to Jankibai, widow of the late Mr. Jugganath Pandurang, clerk, Chief Accountant's office, a contributor to the Municipal Pension Fund.

"The amount to be met from the grant for Pensions and Gratuities for the current year."

No. 8446. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 16904, dated 3rd instant, sanction be given to the acceptance by him of the tender of Messrs. Bhedwar & Co., the lowest of the 7 tenders received for the construction of Connaught and Sussex Roads, at a cost of Rs. 30,302, to the debit of the allotment of 15 lakhs for roads and streets provided in the 35 lakhs loan."

No. 8447. *Resolved*: "That the following be *recorded*:—Memorandum No. 16705, dated 1st instant, from the Commissioner, reporting, with reference to the Standing Committee's Resolution No. 4484, dated 3rd October 1888, the transfer of Rs. 1,50,000 from the 35 lakhs various Sanitary Works Loan Deposit Account to the Municipal General Fund Pass Book, on the 24th ultimo."*

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* The Chief Accountant reports that the balance standing to the credit of the above deposit account, after effecting the transfer now reported, amounts to Rs. 12,60,728-3-9 as under :—

	Rs.	a.	p.
In cash	70,798	15	9
In 4 per cent. Government Paper for Rs. 11,94,100... ...	11,89,929	4	0
Rs.	12,60,728	8	9

Considered the following :—

STATEMENT of Houses or Portions of Houses which fell during the month of September 1892.

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties. Persons injured.	Casualties. Persons killed.	Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	REMARKS.
							1892.					Rs.			
1	A.	2-16	Ghoga Street.	Rustomjee Nanabhoy Byramjee.	House ...	Not known	4th Sept.	Old age	East side wall.	*Nil.*	*Nil.*	700	*Nil.*	*Nil.*	
2	„	13	King's Lane ...	Narotam Govindjee	Do. ...	„ ...	18th „	„ ...	Centre rooms	„	„	2000	„	„	
3	C.	23-27	Durgadevi Road.	Hargowan Khushal	Chal ...	„ ...	20th „	Effect of weather.	East portion.	„	„	300	„	„	
4	„	1	Tapal Wadi. ...	Narayen Panachand.	House ...	„ ...	3rd „	„ ...	„	8	„	1500	taken.	„	
5	„	104-6	Panaswadi ...	Verjiwandas Madhowdas.	Do. ...	„ ...	3rd „	„ ...	„	*Nil.*	„	200	*Nil.*	„	
6	„	40-46	Kalbadevi Road.	Sorabjee Nowrojee Moosa.	Do. ...	„ ...	5th „	Rain ...	S. E. corner .	„	„	300	taken.	„	
7	„	174	Bhuleshwar Road.	Jagmohandas Vandrawandas.	Do. ...	„ ...	23rd „	„ ...	Floor ...	„	„	100	...	„	
8	„	80	Duncan Road...	Bai Jeverbai, widow of Mancharam Petamber.	Do. ...	„ ...	24th „	Excessive rain...	S. portion ...	„	„	80	...	„	
9	D.	...	Gamdevi Road.	Gangadhar Bhiwjee	Masonry old building.	„ ...	7th „	Pulling down adjoining portions	Rear portion.	8	„	400	...	„	
10	„	5	Kandawadi ...	Shewjee Poonjajee.	Do. ...	„ ...	19th „	Rain water soaking in the wall.	N. E. corner .	*Nil.*	„	200	taken.	„	
11	„	...	Mugbhat Cross Lane.	Ranchordas Harjiwan.	Chal ...	„ ...	23rd „	„ ...	Middle rear portion.	„	„	300	„	„	
12	„	...	Gamdevi Road (Babulnath Temple Oart).	Jaikisondas Gangadas.	Tiled shed ...	„ ...	2nd „	Heavy rains ...	.....	„	„	100	„	„	
13	F.	2338	Dharavi Road.	John Enus Pereira.	Tiled shed with mud masonry walls.	25 years ...	1st „	„ ...	S. E. corner .	„	„	10	...	„	
14	„	3153	Sion Agarwada	Zuza Seal	House ...	25 „ ...	1st „	Posts not properly bedded and being of insufficient sizes.	Tiled verandah roof.	„	„	7	...	„	

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties. Persons injured.	Casualties. Persons killed.	Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	Remarks.
							1892.					Rs.			
15	F.	...	Sivri Fort Road.	Damajee Padman Agri.	A ground floor tiled shed with mud masonry walls.	4 years ..	1st Sept.	Bad woodwork, &c.	Half ...	*Nil.*	*Nil.*	50	...	*Nil.*	
16	„	439	Sivri Cross Road.	Bomanjee Cooverjee.	Stable shed, tiled.	20 „ ...	1st „	Posts rotten and not properly bedded.	Whole ...	„	„	150	...	„	
17	„	...	Dadar Road ...	Sorabjee Dosabhoy Framroz.	Tiled shed with tatya walls.	4 „ ...	2nd „	Posts not properly bedded and not on hard foundation.	A portion ...	„	„	60	...	„	
18	„	2350	Sion Road ...	Anandibai, widow of Bapuji Krishnajee Gawand.	Two storied house.	25 „ ...	2nd „	Repairs neglected	N. main wall and N. E. corner.	„	„	50	...	„	
19	„	276	Sevri Coliwada	Deoji Sao Kote ...	West main wall of the ground floor storied house.	15 „ ...	2nd „	No footing to the wall and being built in mud masonry.	West main wall of the ground floor	„	„	15	...	„	
20	„	1225	Parel Tank Road near Bhoewadi.	Nihalchand Bilchand.	Shed ..	5 „ ...	6th „	The walls of lower portions of mud masonry. The posts rotten at the bases and not properly bedded.	Whole shed.	„	„	175	...	„	
21	G.	237	Purbhadevi Road.	The Manager of the St. Francis Assis Chapel.	Chapel ...	50 „ ...	1st Sept.	Being mud walls.	Portion of the north external wall.	„	„	25	...	„	
22	„	...	Do.	Mansoor Balgovind.	House ...	25 „ ...	1st „ ...	„	„ ...	„	„	15	...	„	

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties. Persons injured.	Casualties. Persons killed.	Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	Remarks.
							1892					Rs.			
23	G	892	Mahim Bazar Road	Bhai Juggonath ...	Shed ...	12 years ...	1st Sept...	Fall of a cocoa-nut tree.	North portion of the shed.	*Nil.*	*Nil.*	10	...	*Nil.*	
24	"	...	Do.	Allarakhia Memon.	" ...	30 " ...	1st " ...	Being old and woodwork rotten.	Portion of the tiled roof.	"	"	15	...	"	
25	"	...	Do.	Do.	" ...	30 " ...	1st " ...	"	" ...	"	"	15	...	"	
26	"	...	Do.	Do.	" ...	30 " ...	1st " ...	"	" ...	"	"	15	...	"	
27	"	...	Do.	Do.	" ...	30 " ...	1st " ...	"	" ...	"	"	15	...	"	
28	"	...	Do.	Do.	" ...	30 " ...	1st " ...	"	" ...	"	"	15	...	"	
29	"	...	Lady Jamsetjee Road	Nathoo Valjee ...	" ...	15 " ...	1st " ...	Mud walls ...	Half the portion of north and east external walls.	"	"	150	...	"	
30	"	...	Do.	Phueeha Moorgal...	" ...	25 " ...	2nd " ...	" ...	Portion of the north external wall.	"	"	50	...	"	
31	"	...	Do.	Valder Francis ...	" ...	20 " ...	2nd " ...	" ...	Portion of the south external wall.	"	"	50	...	"	
32	"	...	Mahim Lohar Chal	Samsoodin Ebrahim	House ...	25 " ...	1st " ...	" ...	North and east portion of the external walls.	"	"	10	...	"	
33	"	...	Worli Koliwada	Bestas Pedroo ...	" ...	60 " ...	1st " ...	Mud walls and weak timber work.	Whole of the west external wall with the roof.	"	"	50	...	"	
34	"	...	Do.	Kaidoo Eithoo ...	" ...	25 " ...	2nd " ...	Do. ...	West portion of the wall with roof.	"	"	20	...	"	

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties. Persons injured.	Casualties. Persons killed.	Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	Remarks.
							1892.					Rs.			
35	G	...	Worli Kolivada.	Bai Jankoobai ...	Shed ...	40 years ...	2nd Sept.	Mud walls and weak timber work	Portion of all the external walls.	*Nil.*	*Nil.*	30	...	*Nil.*	
36	,,	...	Do.	Hajee Bhanjee ...	House ...	30 ,, ...	2nd ,, ...	Mud walls ...	North portion of the wall.	,,	,,	10	...	,,	
37	,,	...	Do.	Mahadoo Vithal ...	Do. ...	20 ,, ...	2nd ,, ...	,, ...	Portion of the wall on the west side.	,,	,,	25	...	,,	
38	,,	...	Do.	Mangool Bhoodia...	Do. ...	27 ,, ...	2nd ,, ...	,, ...	Portion of the wall on the south side.	,,	,,	15	...	,,	
39	,,	...	Carroll Road...	Iao Braz Fernandez	Chal ...	30 ,, ...	6th ,, ...	,, ...	Portion of the wall.	,,	,,	10	...	,,	
40	,,	...	Lady Jamsetji Road.	Mirza Husein Khan	Shed ...	20 ,, ...	7th ,, ...	Weak materials...	Portion ...	,,	,,	5	...	,,	
41	,,	...	Do.	Madusudan Damodar.	House ...	15 ,, ...	7th ,, ...	Mud walls ...	Portion of the south main wall.	,,	,,	50	...	,,	
42	,,	...	Do.	Pavel Miranda ...	Shed ...	10 ,, ...	7th ,, ...	Weak materials...	Portion ...	,,	,,	10	...	,,	
43	,,	...	Mahim Loharchal.	ShamraoPandurang	House ...	15 ,, ...	9th ,, ...	Mud walls ...	Portion of the south side.	,,	,,	5	...	,,	
44	,,	...	Mori Road.....	Anandrao Chintoba	Do. ...	20 ,, ...	18th ,, ...	,, ...	Portion of the wall on the east.	,,	,,	10	...	,,	
45	,,	...	Lady Jamsetji Road.	Harivalubh Balgovind.	Do. ...	12 ,, ...	22nd ,, ...	,, ...	Portion of the eastside wall	,,	,,	10	...	,,	
46	,,	...	Mahim Loharchal.	Oosman Bapoo Banguwalla	Do. ...	25 ,, ...	22nd ,, ...	,, ...	Portion of the north side wall.	,,	,,	15	...	,,	
47	,,	...	Lady Jamsetji Road.	Pavel Miranda ...	Do. ...	15 ,, ...	4th ,, ...	,, ...	Portion of the south & the west walls.	,,	,,	20	...	,,	

No. B. 8226 of 1892-93.

Bombay, 29*th October* 1892.

Forwarded to the Municipal Commissioner.

JAMES W. SMITH,
Acting Executive Engineer, Municipality.

No. 16762 of 2*nd November* 1892.

Forwarded to the Standing Committee for information.

H. A. ACWORTH, Commissioner.

Resolved : "That memorandum No. 16762, dated 2nd instant, from the Commissioner, forwarding a return of houses or portions of houses which fell during the month of September 1892, be recorded on the Minutes of this day's meeting."

No. 8448.

Resolved : "That memoranda Nos. 16761 and 17105, dated 2nd and 8th instant, from the Commissioner, forwarding, for information, letters Nos. 957 and 983, dated 31st October and 7th instant, from the Deputy Executive Engineer, Water Works, reporting that there was no case of burst on the Tansa line during the weeks ending 29th ultimo and 5th instant, be *recorded*.

No. 8449.

"That, in the opinion of the Committee, it is not necessary that reports should be submitted when there are no bursts; and that it will be sufficient if cases of bursts only are reported."

The further consideration of the following was postponed till next week:—Memorandum No. 16038, dated 24th October 1892, from the Commissioner, forwarding Counsel's opinion on the question of the legal position of the Standing Committee as regards calling for reports, &c.

Resolved : "That the following be printed and circulated and brought on for consideration a fortnight hence. Memorandum No. 17088, dated 8th instant, from the Commissioner, forwarding the opinion of Mr. Mansergh, Member of Council of the I. C. E., &c., &c. on the question of the relative merits of steel and iron water mains."

No. 8450.

Resolved : That the following be laid on the table. Letter, dated 8th instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of receipts and disbursements at the end of each week for the month of

No. 8451.

October last, and compared them with the general and subsidiary ledgers and journals, and found them correct. Forwarding the usual summary and statement of their scrutiny of the accounts."

Considered letter No. 17062, dated 7th instant, from the Commissioner to the Secretary, as under :—

SIR,—In answer to Standing Committee's Resolution No. 8073 of 2nd instant, I have the honour respectfully to observe that it would not, in my opinion, be advisable to lay the papers in question on the table of the Standing Committee.—I have, &c.,

H. A. ACWORTH, Commissioner.

Proposed by A. G. Viegas, Esq., seconded by Kaikhosro N. Kabrajee, Esq.—

No. 8452. "That the Corporation be informed that the Standing Committee commenced to make enquiries into the application, dated 25th July last, from Praga Walla, Premabai, Mirza Mahomed and other dealers in country boots and shoes, but are unable to complete the same, as the Commissioner states that it would not, in his opinion, be advisable to lay the papers in this matter on the table."

Carried.

No. 8452A. *Resolved* : "That the Progress Report up to the end of September 1892 of new works now in course of construction be laid on the table and brought on for consideration at a future meeting."

Considered letter No. 16607, dated 31st October 1892, from the Commissioner to the Secretary, as under :—

SIR,—With reference to Standing Committee's Resolution No. 2955, of 17th June 1891, I have the honour to report that the High Court in March last gave its decision on the reference made by the Chief Judge, Small Causes Court, in the case of Mr. Goverdhandas Goculdas Tejpal, and the result of the decision is that in order to bring a case within the scope of section 142 (3) there must have been an express direction under section 248 (2) by the Commissioner dispensing with the provision of a separate water closet, privy or urinal for each of two or more premises, and such direction must have been made in view of the fact that some particular water closet, privy or urinal has been and is used in common by the occupiers of such premises, or that, in the opinion of the Commissioner, a water closet, privy or urinal may be so used, and is sufficient for all the occupiers of the two or more premises using or intending to use the same, and the inference is that in such cases Halalkhor tax would be leviable notwithstanding the provisions of sub-section 142 (2).

These principles are now being acted on, and the revision of lists of such properties as are governed by them is now in hand. I have also dealt with, and am dealing with, the several cases referred to in the resolution above quoted in the light of these principles.—I have, &c., H. A. ACWORTH, Commissioner.

Resolved: "That, in reply to their several applications as per margin, the applicants be informed that the High Court in March last gave its decision in the reference made by the Chief Judge, Small Causes Court, and the result of the decision is, that in order to bring a case within the scope of section 142 (3) of the Municipal Act, there must have been an express direction under section 248 (2) by the Commissioner dispensing with the provision of a separate water closet, privy or urinal for each or two or more premises, and such direction must have been made in view of the fact that some particular water closet, privy or urinal has been and is used in common by the occupiers of such premises, or that, in the opinion of the Commissioner, a water closet, privy or urinal may be so used, and is sufficient for all the occupiers of the two or more premises using or intending to use the same. These principles are now being acted on, and the revision of list of such properties is now in hand. That the Commissioner has dealt with and is dealing with the several cases referred to by the applicants.

1.	Application, dated 21st December 1889, from Mr. Sumihaji Tilaji and others.	
2.	Do. do. do. do.	Mr. Dewraj Kastoor Talaksi.
3.	Do do. do. do.	Mr. Nowla Fulla.
4.	Do. dated 8th January 1890, from the Secretary, Bombay Pinjrapole.	
5.	Do. dated 13th January 1890, from Mr. Premji Parpia.	
6.	Do. dated 18th June 1890, from the Secretary, Bombay Pinjrapole.	

No. 8453.

"That copy of this Resolution and of the Commissioner's letter No. 16607, dated 31st October 1892, be forwarded to the Corporation with reference to letter, dated 9th December 1889, from Mr. Sorabjee Shapoorjee Bengallee, C.I.E."

Resolved: "That the following be struck out of the Agenda paper :— Letter, dated 9th May 1892, from Messrs. Walsh, Lovett, Mitchell & Co., the Contractors for the Tansa Duct, on the subject of the return of their deposit money."

No. 8454.

The following return was read and *recorded* :—

Return of fires at Musjid Bandar Road, Gowlee Mohla and Dharavi Road (Mahim), forwarded with the Commissioner's memorandum No. 17064, dated 7th November 1892.*

No. 8455.

* See Appendix C.

The following statement * was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 6th November 1892.

The consideration of the Budget estimates for 1893-94 was proceeded with. It was agreed that the income portion of the Budget be first considered.

INCOME.

The estimate of income for the year 1893-94 from General Tax at 8 per cent. (including contribution of Rs. 96,767 from Government and Rs. 1,53,904 from the Port Trust) was passed at Rs. 16,91,855.

(*The estimate for the current year is Rs.* 16,99,358.)

On the suggestion of Mr. Javerilal U. Yajnik, it was agreed that a comparative statement be shewn in the introductory remarks, giving separately the amounts estimated to be realized on account of the General Tax from private property holders, the Government and the Port Trust, respectively, for the current and ensuing years.

The estimate of income for the year 1893-94 from additional tax under section 140 (*c*) of the Municipal Act for Fire Brigade charges at ½ per cent., including Rs. 9,619 from Port Trust and Rs. 6,048 from Government, was passed at Rs. 1,05,741.

(*The estimate for the current year at ¾ per cent. is Rs.* 1,49,400.)

The estimate of income for the year 1893-94 from Wheel Tax, as per schedule G of the Municipal Act,† was passed at Rs. 3,28,324, including toll of 2 annas per vehicle to be levied on all vehicles entering the City from Salsette, which are not liable to the tax leviable under section 180 of the Municipal Act.

†SCHEDULE G—*See Section* 180.

Description of Vehicle or Animals.	Maximum amount of tax per quarter.
	Rs. a. p.
Each four-wheeled vehicle, drawn or impelled by horses, ponies, mules, donkeys, bullocks, or machinery	5 0 0
Each two-wheeled vehicle, drawn or impelled by horses, ponies, mules, donkeys, bullocks, or machinery	3 0 0
Each vehicle, drawn or impelled otherwise than by horses, ponies, mules, donkeys, bullocks, or machinery	2 0 0
Each horse, pony, or mule, of a height of 12 hands or upwards	0 0 0
Each horse, pony, or mule, of a height of less than 12 hands	2 0 0
Each bullock or buffalo kept for draft or pack purposes	1 0 0
Each donkey kept for draft or pack purposes or for riding	1 0 0

(*The estimate for the current year is Rs.* 3,16,312.)

* *See* Appendix B.

The estimate of income for the year 1893-94 from Town Duties was passed at Rs. 9,00,000 and at the following rates:—

	Rs.	a.	p.
Grain of all sorts per candy...	0	4	0
Flour of all sorts—75 per cent. of the rate at the time being levied on the grain from which the flour is prepared.			
Wines and Sprits, per imperial gallon ...	0	4	0
Beer, per imperial gallon	0	0	6
Sugar, Molasses and Goor, per cwt.	0	8	0
Ghee, per Bombay maund	0	8	0
Timber, excluding Railway sleepers ...	2½ per cent. on market value.		
Firewood, per candy	0	2	0

(*The estimate for the current year is the same.*)

The estimate of income for the year 1893-94 from licenses for dangerous and offensive Trades was passed at Rs. 50,000.

(*The estimate for the current year is Rs.* 45,000.)

The estimate of income for the year 1893-94 from licenses to Surveyors and Plumbers (streets and buildings) was passed at Rs. 2,850.

(*The estimate for the current year is Rs.* 2,750.)

The estimate of income for the year 1893-94 from licenses for Land conveyances, Music, &c., issued by the Commissioner of Police, was passed at Rs. 24,000.*

(*The estimate for the current year is Rs.* 23,000.)

The estimate of income for the year 1893-94 of receipts from Government, under the terms of Bombay Act V of 1878, in lieu of Liquor Licenses, was passed at Rs. 1,43,750.

(*The estimate for the current year is the same.*)

The estimate of income for the year 1893-94 of receipts from Government for the Municipal duty on tobacco under Act IV of 1857 was passed at Rs. 1,82,000.

(*The estimate for the current year is Rs.* 1,80,000.)

The estimate of income for the year 1893-94 from Halalkhor Tax at 3 per cent. and as charged for special service was passed at Rs. 5,74,000.

(*The estimate for the current year is Rs.* 5,53,000.)

The estimate of income for the year 1893-94 from Water Tax at 4 per cent. and at special rates was passed

* Land Conveyance Licenses... ... ... Rs. 11,704
Music Licenses ... ... „ 10,336
Sundry „ ... ... „ 1,960
Rs. 24,000

at Rs. 13,25,000, including the charges for water supplied for Municipal purposes.

(*The estimate for the current year is Rs.* 12,61,300.)

The estimate of income from Market receipts for 1893-94 was passed at Rs. 3,61,000.

(*The estimate for the current year is Rs.* 3,33,500.)

The estimate of income for the year 1893-94 from Public Gardens was passed at Rs. 6,700.

(*The estimate for the current year is Rs.* 6,290.)

The estimate of income for the year 1893-94 from Tramway rent was passed at Rs. 36,200.

(*The estimate for the current year is the same.*)

The estimate of income for the year 1893-94 from Miscellaneous Fines was passed at Rs. 7,000.

(*The estimate for the current year is the same.*)

The estimate of income from Miscellaneous Receipts for 1893-94 was passed at Rs. 1,20,000.*

(*The estimate for the current year is Rs.* 1,08,357.)

The estimate of income for the year 1893-94 from Miscellaneous Fees was passed at Rs. 40,300.†

(*The estimate for the current year is Rs.* 46,500.)

The estimate of income for the year 1893-94 from Miscellaneous Savings was passed at Rs. 2,000.

(*The estimate for the current year is the same.*)

The estimate of income for the year 1893-94 from contributions from Municipal servants towards Pension, &c., Fund was passed at Rs. 15,300.

(*The estimate for the current year is Rs.* 15,000.)

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* Rent of Dhobiwada and Shops ..... Rs. 17,084
„ Chawls ..... „ 15,012
„ Milch-cattle Stables ..... „ 16,623
„ Lands, Tanks, &c. ..... „ 30,000
„ Police and Fire Brigade quarters ..... „ 19,492
Sundry Receipts ..... „ 21,789

Rs. 1,20,000

† *Health Department Fees based on past three years' actuals.*

Removing and skinning dead animals ... ... Rs. 14,500
Grave digging ... ... „ 3,500

Rs. 18,000

Engineer's Department.

Building Fees (galleries, rewas, scaffoldings and weather frames) ... ... Rs. 8,100
Opening roads and footpaths for cleaning drains and laying water pipes ... ... „ 4,300
Occupying public roads ... ... „ 3,000
Sundry Fees ... ... „ 200

15,600

Assessment and Collection Department.

Notice, Warrant, Battakie, and Sundry Fees ... ... Rs. 6,700

Rs. 40,300

The estimate of income for the year 1893-94 from interest and profit on Loan and Reserve Funds investments was passed at Rs. 2,00,000.

(*The estimate for the current year is Rs.* 1,00,000.)

The estimate of income for the year 1893-94 from interest on Sinking and Insurance Funds investments was passed at Rs. 29,800.

(*The estimate for the current year is* Rs. 21,600.)

The estimate of income from opening Cash Balance was passed at Rs. 16,00,000.

(*The estimate for the current year is the same.*)

The total estimate of current Revenue for the year 1893-94 is Rs. 77,45,820, including the opening balance of Rs. 16,00,000.

(*The estimate for the current year is Rs.* 75,50,317.)

EXPENDITURE.

Corporation and Standing Committee's Establishment—Detailed Statement No. 1.

The Secretary reported that this day applications for increases of salary had been made to him by Mr. Michael, Office Manager, and Messrs. Narayan R. Damle and H. Ferreira, second and third clerks.

It was agreed that these applications be referred to the Commissioner and the Secretary for opinion.

The estimate of expenditure for the year was passed at Rs. 55,020.

The increases are as under :—

	Rs.
Sanctioned increment in pay of Office Manager	120
Increase in salary of 4th clerk from Rs.45 to 50 per mensem	60
Increase in pay of 1 peon from Rs. 6 to Rs. 8 per mensem.	24
Increase in pay of havildar from Rs.13 to Rs.14 per mensem	12
	216
Decrease on account of there being no charge this year for clothing of peons	208
Net increase ...Rs.	8

(*The grant for the current year is Rs.* 55,012.)

Municipal Commissioner's Personal Office Establishment—Detailed Statement No. 2.

Resolved : " That the schedule of appointments framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee,

No. 8480.

be modified under section 79 (2), to allow of the following addition to the said Schedule :—

Havildar—Increase of Re. 1 per mensem—Rs. 12 per annum.

" That the estimate of expenditure for this department for the year 1893-94 be passed at Rs. 53,828 as per detailed Statement No. 2 and schedule attached thereto."

The increases are as under :—

Increase in the pay of the havildar	Rs.	12
Sanctioned increment of personal allowance to Head Clerk	,,	240
Printing	,,	500
	Rs.	752
Less—		
Decrease on account of peons' clothing	Rs.	352
Net increase ...	Rs.	400

(*The grant for the current year is Rs.* 53,428.)

General Office Establishment—Detailed Statement No. 3.

No. 8481.

Resolved : " That the schedule of the appointments framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified under section 79 (2) to allow of the following additions thereto :—

Increase in pay of Hindu attendant for supplying water, Rs. 3 per mensem... Rs. 36 per annum.

ESTABLISHMENT REQUIRED FOR VARIOUS PURPOSES AT THE NEW MUNICIPAL OFFICES.

Electric Lighting.			
Engineer...	Rs.	100	per mensem.
Fitter	,,	40	,,
Driver	,,	45	,,
Stoker	,,	18	,,
Oilman and beltman	,,	12	,,
Hydraulic Lift and Fire Service.			
Driver for engine and pump ...	,,	45	,,
Fireman...	,,	18	,,
Fitter	,,	45	,,
Drainage and Water Supply.			
Plumber...	,,	45	,,
General Establishment.			
Mukadam of hamals	,,	15	,,
Three hamals on Rs. 10 ...	,,	30	,,
Four hamals on Rs. 9	,,	36	,,
	Rs.	449	,, or Rs. 5,388 per annum.
			Rs. 5,424
Less—			
Decrease of 3 peons and 2 hamals on Rs. 10 each per mensem			600
			Rs. 4,824

" That this estimate be passed at Rs. 29,372."

The increases are as under :—

Establishment as above	Rs.	4,824
Less—Decrease on account of peons' clothing ...	„	120
Net increase...	Rs.	4,704

(*The grant for the current year is Rs.* 24,668.)

ACCOUNTS AND EXPENDITURE AUDIT ESTABLISHMENT.

Detailed Statement No. 4.

No. 8482. *Resolved* : "That the schedule of appointments framed under Section 79 of the Act, already sanctioned by the Standing Committee, be modified under Section 79 (2), to allow of the following additions to the said schedule :—

	Rs.
Conveyance allowance to cashier, Rs. 15 per mensem ...	... 180
Increase of pay of havildar Re. 1 per mensem	... 12
„ „ two peons at Rs. 2 each per mensem...	... 48
	Rs. 240

"That the estimate of expenditure for this department be passed at Rs. 57,396."

The increases are as under :—

		Rs.
Establishment as above	...	240
Increment allowed to establishment within sanctioned limits	...	180
	Rs.	420
Less—Decrease on account of peons' clothing	„	352
Net increase ...	Rs.	68

(*The grant for the current year is Rs.* 57,328.)

Assessment and Collection Department—Detailed Statement No. 5.

PROPERTY AND WHEEL TAX ESTABLISHMENT.

No. 8483. *Resolved*: "That the schedule of appointments framed under section 79 of the Act, already sanctioned by the Committee, be modified under section 79 (2) to allow of the following additions to the said schedule :—

Increase of pay to havildar at Re. 1 per mensem ...	Rs.	12
Increase in pay of 2 peons at Rs. 2 each „ ...	„	48
	Rs.	60
4 Additional peons on Rs. 10 each	„	480
Total ...	Rs.	540

"That the grant for Property and Wheel Tax Establishment be passed at Rs. 1,56,754; that the grant for Town Duty collection be passed at Rs. 57,000; that the grant for Toll collection be passed at Rs. 1,680."

LICENSING ESTABLISHMENT.

No. 8484. *Resolved*: "That the schedule of appointments framed under section 79 of the Act, already sanctioned by the Standing Committee, be modified under Section 79 (2) to allow of the following additions to the said schedule :—

Increase in pay of two peons at Rs. 2 each per mensem, Rs. 48.

"That the grant for licensing be passed at Rs. 26,578."

REVENUE AND REFUND AUDIT ESTABLISHMENT.

No. 8485. *Resolved*: "That the schedule of appointments framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified under section 79 (2) to allow of the following additions to the said schedule :—

Increase in pay of 2 peons at Rs. 2 each per mensem, Rs. 48.

"That the grant for this department be passed at Rs. 24,048.

"That the total grant for the Assessment and Collection Department be passed at Rs. 2,66,060."

The increases are as under :—

PROPERTY AND WHEEL TAX ESTABLISHMENT.

	Rs.	Rs.	Rs.
Establishment as above	540		
Providing telephonic communications with B, C and E Wards	600		
Preparing and printing Assessment book ...	15,000		
Stationery	380		
Total Rs.	16,520		
Less—Decreases—			
Ward Inspection Offices—temporary establishment not required in 1893-94 Rs.	1,200		
Peons' clothing... ... ... „	1,048		
	2,248		
Net increase Rs.	14,272		
			14,272
Less—Decreases—			
Town Duty Collection—			
Decrease in commission to Port Trust	3,000		
Less—			
Increase in commission to G. I. P. and B. B. & C. I. Railways...	1,700		
		1,300	
Carried over...		1,300	14,272

	Rs.	Rs.	Rs.
Brought forward ...		1,300	14,272
Licensing Establishment—			
Decrease on account of clothing ... ...Rs. 168			
„ „ Land Conveyance License Estabt.,&c. „ 716			
	884		
Less—			
Increase in pay of 2 boy-peons at Rs. 2 each ...	48		
		836	
Revenue and Refund Audit Establishment—			
Decrease on account of clothing	120		
Less—			
Increase in pay of 2 boy peons at Rs. 2 each ...	48		
		72	
			2,208
Net increase ...			Rs. 12,064

(*The grant for the current year is Rs.* 2,53,996.)

Fire Brigade—Detailed Statement No. 6.

No. 8486. *Resolved* : " That the schedule of appointments framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified under section 79 (2) to allow of the designation 'Superintendent and Head Engineer' being changed to that of 'Head Foreman,' and also to allow of the pay of the other five foremen being fixed as follows:—

1 on Rs. 200 ; 2 on Rs. 150 ; 2 on Rs. 125 each per mensem.

" That the grant for the Brigade be passed at Rs. 1,11,515."

It was agreed that the word 'four' under section III of stock be struck out.

(*The grant for the current year is* Rs. 1,37,930, *the net decrease in the grant for* 1893-94 *being* Rs. 26,415.)

Maintenance of Public Gardens—Detailed Statement No. 7.

No. 8487. *Resolved* : " That the estimate of expenditure for Gardens be passed at Rs. 80,147 as per detailed statement No. 7 and schedule attached thereto."

The increase is as under :—

Garden on the Flats—		
Water supply	Rs.	550
Less—Decreases on account of—		
Abolition of post of Fee Clerk on Rs 25 a month	Rs.	300
Salary drawn by present Superintendent below the maximum	„	2,400
	Rs.	2,700
Deduct—Increase	„	550
Net Decrease ...	Rs.	2,150

(*The grant for the current year is Rs.* 82,297.)

BOMBAY, 16*th November* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.C.M.C., *Chairman.*
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON, R. A. ACWORTH, Esq., I. C. S., Commissioner; the ACTING DEPUTY EXECUTIVE ENGINEER, Drainage Works; the CHIEF ACCOUNTANT; and the SECRETARY.

The signing of the minutes of the meeting held on the 11th instant, was postponed.

The seal of the Corporation was affixed to deed of agreement between Mr. Sorabji Jamshedji Gopia and the Corporation, securing to the Municipality, the right to acquire, at any future time, the set-back of property situate at Nos. 77-79, Bazar Gate Street, without payment of any compensation in respect of the unauthorised work, indicated on the plan annexed to the deed, and at the rate of Rs. 30 per square yard, for any land shown on the plan scored red to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition.

The seal was also affixed to deeds of contract (1) with Mr. Hari Dharamsi for landing and conveying from ships lying in the harbour, or the docks, to Love Grove pumping station, the machinery, engines and boilers to be erected at Love Grove; and (2) with Mr. Pherozeshah Dhanjibhai Patel for the construction of Engineer's quarters and outhouses thereat.

The seal was also affixed to 2 attested duplicate debentures of Tansa Water Works Loan, No. 3736, of Rs. 500, and No. 1049-50, of Rs. 1,000.

No. 8565. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 17726, dated this day, sanction be given to the cutting off of water-connections as per list submitted therewith."

No. 8566. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 17428, dated 11th instant, sanction be given to the payment to Messrs. Richardson & Cruddas, at the rate of Rs. 8 per cwt., for the 16″ diameter cast-iron bend of 104° purchased by the Executive Engineer, Water Works, for the diversion main at the subsidence of Gibbs Road. The amount to be temporarily debited to the sanctioned advance, for the purchase

of Stores for Water Works maintenance, &c., and subsequently adjusted against the grant which may be sanctioned by the Corporation for relaying the water main in that road."

Resolved : "That, as applied for by the Commissioner, in his letter No. 17360, dated 10th instant, sanction be given to the purchase, from Messrs. Khursedji & Sons, of four pairs of bullocks for the meat vans (Market Department), at the rates per pair of Rs. 150 for bullocks above 12-2 up to 13-1½, and Rs. 200 for those above 13-2. The charge to be debited to the Budget provision of Rs. 2,400 ; and the cost of feeding for the remaining portion of the year to be met out of the feeding grant.

No. 8567.

"That letter No. 17360, dated 10th instant, from the Commissioner, reporting that he has sanctioned the purchase of 6½ pairs, from Messrs. Khursedji & Sons, to replace those sent to Pinjrapol, to be paid for at the same rate as above, be *recorded*."

Read letter No. 17607, dated 14th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to state that the Gas Company preferred a bill, dated the 29th February last, against the Municipality, amounting toRs. 2,204-4-6, for repairs to and diversions of gas mains in the Supari Bag and Dadar Roads. The works were necessitated by the laying of the 48" Tansa main in these roads, the line of which crossed and recrossed the lines of the gas mains. The bill has been paid, but the charges on account of repairs included therein are to be recovered from Messrs. Sitaram Laxuman & Co., contractors for pipe line from Ghatkopar to Kala Chauki Road who are liable under their contract to pay them, as the repairs had to be effected in consequence of their having broken the gas mains during the progress of the above work. The charges included in the bill on account of diversions are alone payable by the Municipality.

2. As the Gas Company's bill did not show separately the charges on account of repairs and diversions they were requested to furnish this information. They have replied that they are unable to give it.

3. A difficulty has thus arisen as to what amount should be charged to Messrs. Sitaram Laxuman & Co. on account of these repairs. The Executive Engineer reports that the charges in the bill are mostly on account of diversions and the amount which the Contractors can fairly be called upon to pay on account of the repairs is Rs. 500. Under the circumstances, I request the favour of the sanction of the Standing Committee to my recovering this amount from the contractors by deducting it from their final certificate.—I have, &c., H. A. ACWORTH, Commissioner.

Resolved : "That, as applied for by the Commissioner, in his letter No. 17607, dated 14th instant, sanction be given to his recovering Rs. 500, from the final certificate, of Messrs. Sittaram Laxumon & Co., contractors for the pipe line from Ghatkopar to Kala Chauki, on account of repairs to gas mains necessitated by the laying of the 48" Tansa main in Supari Bag and Dadar Roads."

No. 8568.

Resolved : "That, as applied for by the Commissioner, in his letter No. 17606, dated 14th instant, sanction be given to the payment, as a special case, of Rs. 2-11-0, conveyance charges incurred by Mr. Kashinath Devji, Inspector, Water Works, on the night of 10th September last, on the occasion of the burst of the 32" Vehar main. To be debited to office contingencies, Water Works."

No. 8569.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 17279, dated 10th instant, the Committee approve, under section 381 of the Municipal Act, of a notice in writing being served on Messrs. Kesheo Kooshaba and Panalal Pooranchund, requiring them to clean out the well attached to their house Nos. 1-2, Piquet Road, as the water thereof is reported by the Health Officer to be in a filthy condition."

No. 8570.

It was agreed that the consideration of the following be postponed till next week:—Memorandum No. 16038, dated 24th October 1892, from the Commissioner, forwarding Counsel's opinion on the question of the legal position of the Standing Committee as regards calling for reports, &c.

Considered letter No. 17366, dated 10th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to state that the British Hotel Lane is in a bad condition. The road way is worn out. It is a private street. Certain lanes in the Fazandari district, situate to the north of Bellasis Road, as shown on the accompanying plan, are also in a bad condition. These are also private streets.

2. If the former lane is repaired by the Municipality, the Executive Engineer reports we will be able to recover the cost from the owners of houses therein. The latter lanes were in the year 1885 repaired by the Municipality and the cost was recovered.

3. I request the favour, under section 305 of the Act, of the sanction of the Standing Committee to my serving notices on the owners of houses adjoining or abutting on the above streets to level

and metal them. In default of compliance therewith, instead of having these lanes repaired at the cost of the Municipality and recovering the same afterwards, I intend to proceed against house-owners under section 471 of the Act, so that the risk of losing through some legal technicality the expenses previously incurred, will be avoided.—I have, &c., H. A. ACWORTH, Commissioner.

No. 8571. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 17366, dated 10th instant, sanction be given, under section 305 of the Municipal Act, to written notices being served on the owners of the several premises fronting, adjoining or abutting the private lane known as 'British Hotel Lane'; and also on the owners of the several premises fronting, adjoining or abutting on certain private lanes or streets in the Fazendari district situate to the north of Bellasis Road as shown on the plan (marked A, dated this day, and filed in the supplement to minute books), requiring them to level and metal the same as the Commissioner shall direct.

"That in default of compliance by the owners of the several premises with this requisition, further action be taken, under section 471 of the Act, for the recovery of the sums respectively recoverable from the parties concerned."

Considered the Progress Reports, up to the end of September 1892, of new works now in course of construction.*

No. 8572. *Resolved*: "That Progress Report, up to the end of September 1892, of new works now in course of construction, be *recorded*."

No. 8573. *Resolved*: "That the following be *recorded*:—Memorandum No. 17438, dated 11th instant, from the Commissioner, forwarding analyses of water as under :—

Sample of unfiltered Tulsi water obtained from the Inlet Well, Malabar Hill Reservoir, on the 1st November 1892.

	Parts per million.
Free Ammonia	·08
Albumenoid Ammonia	·07

Sample of filtered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 1st November 1892.

	Parts per million.
Free Ammonia	·01
Albumenoid Ammonia	·06

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir, on the 1st November 1892.

	Parts per million.
Free Ammonia	·03
Albumenoid Ammonia	·007

* *See* Appendix D.

Sample of Tansa water taken from a Hydrant on the 27" Main in Arthur Road, on the 1st November 1892.

	Parts per million.
Free Ammonia	·005
Albumenoid Ammonia	·05"

No. 8574. *Resolved* : " That letter, dated 9th instant, from Mr. S. F. D'Souza, on the subject of laying water mains in Coombarwara be *recorded*."

The following return was read and *recorded* :—

No. 8575. Return of fires at Middle Pakhady (Warli), Chukla and Parel Road, forwarded with the Commissioner's memorandum No. 17576, dated 14th November 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 13th November 1892.

No. 8576. *Resolved* : " That the following be forwarded to the Corporation with reference to Item No. 15 on the Agenda paper of the adjourned meeting called for t o-morrow :—Letter, dated 16th instant, from Messrs. Joseph Ezekiel and Aaron Daniel, protesting against the proposed site for the burial ground of the Beni-Israel community at the junction of Victoria and Mount Roads."

The Secretary reported the receipt of a memorandum, dated 7th instant, addressed to him by the Commissioner, enclosing a letter, dated 20th ultimo, purporting to be signed by Messers. Badrudin Tyabji, Fardunji N. Banaji, and Thomas Lidbetter, protesting against the " Gathering of Family Groups" in the Municipality.

The memorandum is as under :—

The enclosed is sent on to Mr. Barrow ; the letter is an obvious forgery. I have ascertained from Mr. Badrudin Tyabji that it is so.—H. A. ACWORTH.

The Secretary observed that Mr. Thomas Lidbetter is no longer in India, having left Bombay some years since.

It was agreed that this anonymous letter be destroyed.

The consideration of the Budget Estimates was proceeded with.

Public Works Department—Detailed Statement No. 8.

GENERAL SUPERVISION AND MISCELLANEOUS DUTIES.

No. 8577. *Resolved* : " That the schedule of appointments framed, under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be

* *See* Appendix C. † *See* Appendix B.

modified under section 79 (2), to allow of the following alterations being made therein :—

Increase in Havildar's pay at Re. 1 per mensem	... Rs. 12
Do. pay of peon at Rs. 2 do.	... „ 24
	Rs. 36"

The estimate for this branch was passed at Rs. 40,924. The increases are as under :—

Increase of Re. 1 per mensem in Havildar's pay	... Rs. 12
„ Rs. 2 in pay of a peon	... „ 24
Purchase of books and periodicals	... „ 60
	Rs. 96
Decrease on account of non-provision of peons' clothing	Rs. 232
Deduct—increases as above	... „ 96
	Net Increase Rs. 136

(*The grant for the current year is Rs.* 41,060.)

WORKSHOPS.

Resolved : " That the schedule of appointments framed, under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified under section 79 (2), to allow of the following alterations being made therein :— No. 8578.

" The appointment of Superintendent of Workshops on Rs. 500 + Rs. 50 conveyance allowance per mensem, to be struck out of the schedule and that of head foreman on Rs. 150 a month, or Rs. 1,800 a year, entered therein.

" That one additional workman and artizan at Re. 1-8-0 per diem, or Rs. 468 a year, be entered in the schedule.

" That the appointment of foreman moulder on Rs. 75 per mensem be struck out of the schedule, as also that of one workman on 10 annas a day or Rs. 16-4-0 per mensem.

" That the Workshop charges (as detailed at pages 31-33 of the Budget), be passed at Rs. 1,05,000, less recoveries of same amount to be made from Municipal departments and private persons for work to be executed in the shops."

Decreases—	Rs.	Rs.
Establishment as above	Rs. 7,695	
Less—increases	„ 2,268	
		5,427
Labour for extra work		6,573
Stores and water supply		22,500
Repairs to machinery		600
		35,100
Deduct—		
Increase in Contingencies, &c.		100
	Net Decrease	35,000

(*The grant for the current year is Rs.* 1,40,000.)

DRAINAGE.

No. 8579.

Resolved : " That the schedule of appointments framed, under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified under section 79 (2), to allow of the following additions and alterations therein :—

" That the designation of Deputy Executive Engineer, Drainage, be changed to Drainage Engineer.

" That one additional surveyor on Rs. 80 a month be added to the schedule at a cost of Rs. 960 a year	Rs.	960
" And that the pay of one peon be increased by Rs. 24 a year	,,	24
Total ...	Rs.	984"

OUTDOOR ESTABLISHMENT.

Resolved : " That the appointment of a head plumber on Rs. 250 a month, *plus* Rs. 50 as conveyance allowance or ... ... Rs. 3,600 a year be inserted in the schedule.*

"That the wages of one carpenter be increased in the schedule by Rs. 5 ...	,,	60	,,
"That the wages of 2 fitters at Rs. 15 each or, be added to the schedule.	,,	360	,,
"That 10 additional labourers at Rs. 10 each a month or	,,	1,200	,,
be added to the schedule.			
"That 6 Halalkhor muccadams at Rs. 15 each a month or	,,	1,080	,,
be added to the schedule.			
"That 66 Halalkhors at Rs. 11½ each or be added to the schedule.	,,	9,108	,,
That the total additional cost for establishment and labour be passed at ...	Rs.	15,408	

" That the Corporation be recommended to sanction the appointment of a head plumber on Rs. 250 a month, *plus* Rs. 50 as conveyance allowance as above."

CLEANING MAIN SEWERS OUTDOOR ESTABLISHMENT.

Resolved : " That 8 labourers at Rs. 10 each a month, or Rs. 960 a year, be added to the schedule."

* The Committee expressed the opinion that this appointment need continue for three years only.

LOVE GROVE PUMPING STATION.

Resolved: "That the schedule of appointments framed, under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified under section 79 (2), to allow of the following alterations being made therein, *viz.*, the addition of the appointments of a Superintending Engineer on Rs. 400 per mensem, with Rs. 50 do. conveyance allowance, and free quarters; of a second Engineer on Rs. 300 a month with free quarters; of a third Engineer on Rs. 85 a month, and of a fourth Engineer on Rs. 75 a month; of 4 Engine-drivers on Rs. 20 each a month; of 2 Winch-drivers on Rs. 20 each a month; of 1 Assistant Packer on Rs. 20 a month; of 4 Firemen on Rs. 18 each a month; of 3 Oilmen on Rs. 12 each a month; of the wages of one fitter being increased in the schedule by Rs. 5 a month; of the employment of 5 coalmen at Rs. 10 each a month; ditto of one Mali or care-taker on Rs. 10 a month—Rs. 14,676 per annum. No. 8580.

"That the Corporation be recommended to sanction the appointments (1) of Superintending Engineer, (2) of Second Engineer as above.

"That the following appointments be *struck out* of the schedule in respect of this pumping station:—

'1 Engineer on Rs. 350 a month; 1 ditto on Rs. 100 ditto; 7 Enginemen and firemen on Rs. 20 each ditto; 5 ditto on Rs. 15 ditto, and 2 ditto on Rs. 12 ditto, 5 assistant firemen on Rs. 10 each ditto—Rs. 8,868 a year.'"

It was agreed that the words "6 tons per day" be *struck out* after the word "coals," page 37.

CARNAC BANDER PUMPING STATION.

Resolved: "That the schedule of appointments framed, under section 79 of the Municipal Act, as already sanctioned by the Standing Committee, be modified under section 79 (2), to allow of the following appointments being *struck out* from the same:—One Engine-driver on Rs. 75 a month; one Engineman and fireman on Rs. 15 do., two assistant firemen on Rs. 10 each do.—Rs. 1,320." No. 8581.

The grant for Drainage was passed at Rs. 1,96,991.
(*The grant for the current year is Rs.* 1,93,429.)

The increases are as under :—	Rs.	
Establishment as above	32,028	
Increments to the Love Grove Pumping Station establishment within sanctioned limits	780	
2 Portable fans for sewer ventilation...	550	
Repairs to chowkis	150	
Cost of waterproof coat	6	
		33,514
Less—Decreases—		
Establishment as above	10,188	
One hand pump	500	
Three sludge carts	450	
Repairing and altering miscellaneous drains and gutters...	3,000	
Purchase of books and periodicals	30	
Non-provision of peons' clothing	184	
Coal	4,000	
Repairs to machinery	5,500	
Supervision of sluices	1,200	
Coals, &c., Carnac Bunder night-soil pumping station.	4,900	
		29,952
Net Increase ...		3,562

WATER WORKS DEPARTMENT.

The pay of the Water Engineer (heretofore designated Deputy Executive Engineer, Water Works) was entered at Rs. 1,250 a month by the Commissioner, who now asked that the figures might be altered to Rs. 1,200.

Proposed by Grattan Geary, Esq., seconded by the Hon. Mr. Fazulbhoy Visram—

"That the salary of the Water Engineer be passed at Rs. 1,200 per mensem.

"That this amount is entered by the Committee in deference to the strong recommendation of the Commissioner, but without the Committee's endorsing that recommendation, in order that the Corporation may have an opportunity of deciding the point."

Amendment, moved by A. G. Viegas, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

No. 8582. "That the salary of the Water Engineer be entered at Rs. 1,000 per month or Rs. 12,000 per year."

On a division, the *amendment* was *carried* by 6 votes *against* 3 votes, and was *carried* as a substantive motion by 6 votes *against* one vote.

Proposed by A. G. Viegas, Esq.—

"That the salary of the Head Clerk be retained as at present and not increased."

The motion was seconded by Javerilal U. Yajnik, Esq.

On a division, there were 5 votes *for* and 5 votes *against* the motion. which was *lost* by the casting vote of the Chairman, and the proposed increase of Rs. 25 a month was *carried.*

No. 8583. *Resolved* : " That the schedule of appointments framed, under section 79 of the Municipal Act, as already sanctioned by the Standing Committee, be modified under section 79 (2), to allow of the following alterations therein :—

"That the designation of the Deputy Executive Engineer, Water Works, be changed to ' Water Engineer ; ' that the appointment of an Assistant Engineer on Rs. 500, and Rs. 150 a month conveyance allowance, be entered for the full year instead of for 4 months as provided in 1892-93 ; that the pay of the Head Clerk and Accountant be increased from Rs. 125 to Rs. 150 a month; and that of the accounts clerk from Rs. 40 to Rs. 50, and entered in the schedule accordingly ; that an additional surveyor on Rs. 80 per mensem be entered ; that one copying clerk on Rs. 40 a month be entered for the full year instead of for 4 months as provided for 1892-93 ; that 2 peons on Rs. 10 each be added and two peons entered at Rs. 9 instead of Rs. 8 each ; that the wages of two peons be entered at Rs. 8 each instead of Rs. 6 each.

" That the appointment of 2 lascars on Rs. 12 each a month be added to the schedule.

" That the designation of ' foreman ' be changed to that of ' overseer.'

" That the following appointments be added to the schedule :—

2	Fitters on	Rs. 35 each a month.	
5	Painters	„ 35 do.	do.
2	Plumbers	„ 24 do.	do.
4	Connection men	„ 14 do.	do.
82	Laborers	„ 12 do.	do.
3	Do.	„ 10 do.	do.
2	Blacksmiths	„ 30 do.	do.
2	Carpenters	„ 30 do.	do.
4	Masons	„ 30 do.	do.
1	Maistry	„ 40	do.
2	Maistries	„ 35 each	do.
2	Do.	„ 30 do.	do.
1	Diver	„ 40	do.
2	Assistant divers	„ 20 each	do.

" That the Inspector, Vehar Division, be granted an allowance of Rs. 30 a month.

"That the appointment of an Inspector for the Kasheli Division on Rs. 110 a month, *plus* Rs. 30 as conveyance allowance, be added to the schedule, for the full month instead of for 4 months as provided in 1892-93.

"That the appointment of Inspector, Mandola Division, on Rs. 110 a month, *plus* Rs. 30 as conveyance allowance, be added to the schedule, for the full year instead of for 4 months as provided in 1892-93.

"That the designation of 8 Khalasis be changed to 'that of watchmen.'

"That the appointment of 24 linemen on Rs. 12 each a month be added to the schedule.

"That the appointment of 24 assistant linemen on Rs. 10 each a month be added to the schedule.

"That the appointment of 3 Ramosees at Rs. 12 each a month be added to the schedule.

"That the following appointments be *struck out* :—

4 Labourers on	Rs.	9 each a month.	
1 Sub-Inspector on	„	20 a month.	
8 Sluicemen on	„	10 each a month.	
28 Labourers on	„	9 „ „	
1 Peon on	„	12 „	
22 Sluicemen on	„	14 each „	For 4 mths.
4 Peons on	„	12 „ „	For 4 mths.
Engineer, Pawai on	„	300 a month.	

"That the appointments of a Sub-Inspector on Rs. 50 a month and one hamal on Rs. 12, now shown in the schedule under "Tansa," be transferred to the general schedule, Water Works."

"That the estimate of expenditure in respect of Water Works be passed at Rs. 2,99,924."

(*The grant for the current year is Rs.* 2,97,010.)

The increases are as under :—

	Rs.	Rs.
Establishment as above	39,104	
Add—		
Provision for overtime and temporary labour ...	3,000	
Repairing old levels	20	
Purchase of books and periodicals	20	
		42,144
Less Decreases—		
Establishment as above	9,824	
Materials	13,000	
Contingencies	1,150	
Peons' clothing	256	
Repairs to Water Works Buildings	2,000	
Repairs to Tulsi main embankment	13,000	
		39,230
Net Increase Rs.		2,914

BOMBAY, 23*rd November* 1892.

AT the meeting of the Standing Committee held this day, there were present:

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L. M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., I.C.S., Commissioner; the CHIEF ACCOUNTANT; and the SECRETARY.

The minutes of the meetings held on the 11th and 16th instant, were signed.

No. 8926. The seal of the Corporation was affixed to deeds of contract (1) with Mr. Sayaji Naguji for the work of filling in with murum the Sankli Tank at Byculla; (2) with Messrs. Govind Saduji & Co. for repairs to the embankment for the Tulsi 24″ main between Bandora and Mahim Mori Road; and (3) with Messrs. Jivanji Dhanjibhoy & Co. for the construction of a new mutton market in the grounds of the Arthur Crawford Market.

No. 8927. *Resolved*: "That, as applied for by the Commissioner, in his memoranda No. 17699, dated 16th instant, Nos. 17776 and 17777, dated 17th idem, Nos. 17896 and 17897, dated 18th of the same, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission:—

Names of Owners.	Where.
Mr. Ranchordas Haridas	...Building at No. 103, Samuel Street.
Messrs. Nurmahamed Ismael and Haji Osman Haji Dawood and others	... Do. at No. 487-501, Memonwada.
Mr. Shankar Ramchandra	... Do. at Walkeshwar.
Bai Fatmabai, wife of Mr. Dada Vajir	Do. at Mount Road, Narelwadi.
Mr. J. Rebeiro	Do. at Gilder Street."

No. 8928. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 18251, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

Considered letter No. 17955, dated 18th instant, from the Commissioner, to the Secretary, as under:—

SIR,—I have the honour to report that Mr. W. Nicholls, Chief of the Fire Brigade, has addressed a communication to me desiring

that the unexpired portion of his covenanted service may be cancelled and that he may join the Municipal service from the date of his first appointment on paying up arrears of pension contribution. His service commenced on 8th September 1890, under a three years' agreement, which will, therefore, in the ordinary course expire on 7th September 1893. I know of no objection to Mr. Nicholls' request being complied with, but, on the contrary, am strongly in favour of it and recommend it for sanction. His age is below 34 years at the present time.—I have, &c.,

H. A. ACWORTH, Commissioner.

Resolved : "That, as recommended by the Commissioner, in his letter No. 17955, dated 13th instant, Mr. W. Nicholls, Chief of the Fire Brigade, be allowed to contribute to the Municipal Pension Fund, from 8th September 1890, the date of his first appointment, on his paying up the arrears of pension contribution to date, and subject to the Corporation's sanction to the unexpired period of his covenanted service being cancelled."

No. 8929.

Considered letter No. 17628, dated 15th instant, from the Commissioner, to the Secretary, as under:—

SIR,— I have the honour to forward copy of a letter from the Deputy Executive Engineer, Water Works, No. 998 of 10th instant, with accompaniments on the subject of Telephonic communication along the line of the Tarsa Duct as far as Tansa. It seems to me essential that such communication should be established, and this was also the opinion of Mr. Clerke.

2. Tenders have been received from the Government Telegraph Department, the Bombay Telephone Co., and Messrs. John, Fleming & Co. As remarked by Mr. Tomlinson, the Government terms are the best unless the Corporation are prepared to undertake themselves the capital cost of constructing the line which I would not advise. Even in such a case the Government tender works out better than that of the Telephone Co., and as for Messrs. Fleming & Co.'s tender, I think there is some mistake in their figures or mi-apprehension as to what is required. The Superintendent of Telegraphs forwards three schemes or systems, costing Rs. 6,720, Rs. 12,180 and Rs. 9 610 per annum respectively. Mr. Clerke and Mr. Tomlinson both favour the cheapest of these, and I concur in their views. I beg to suggest that the Standing Committee should recommend the Corporation to accept this, that is, the scheme costing Rs. 6,720 per annum, and to authorize me to intimate the same to Government without delay.—I have, &c.,

H. A. ACWORTH, Commissioner.

Resolved : "That letter No. 17628, dated 15th instant, from the Commissioner, be brought on for consideration next week."

No. 8930.

Considered the following :—

No. 17088 OF 1892-93.

BOMBAY, *8th November* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—I have honour to forward Mr. Mansergh's report on the questions submitted to him as per Standing Committee's Resolution No. 3640 of 13th July 1892, as well as his replies to a further set of questions prepared by Mr. Tomlinson. His fee is 250 guineas, for which he has sent me a bill, and I request early sanction to the same, out of Surplus Cash Balance, to be subsequently adjusted against the loan for the steel main, if raised.—I have, &c.,

H. A. ACWORTH, Commissioner.

BOMBAY WATER: STEEL PIPES.

WESTMINSTER, *September 29th*, 1892.

H. A. ACWORTH, ESQ., C.S.

DEAR SIR,—I duly received yours of the 19th July, which was acknowledged on the 11th August, and on the 26th August I had the pleasure of an interview with Mr. Tomlinson, when the question of fees was discussed and it was arranged that I should prepare a report upon the use of steel pipes in accordance with the terms of your letter.

The points upon which my opinion is specially desired are set out under four headings as follows :—

"1*st*.—In your opinion has the time arrived when every Water-
"supply Engineer in designing works embracing the use
"of large iron mains should carefully consider the use of steel
"as compared with cast-iron ?"

"2*nd*.—What is your opinion as to the probable relative rates of
"corrosion of steel and cast-iron pipes, both internally and
"externally, when laid above ground and exposed to the air ?"

"3*rd*.—Do you think that precautions can be taken in the mainten-
"ance of steel mains, which will counterbalance any dis-
"advantage they may have as compared with cast-iron, in
"regard to length of service, having regard to their being so
"much thinner ?"

"4*th*.—Do you approve of the recommendations set forth in the
"reports forwarded, or would you recommend any modifi-
"cation of them ?"

These instructions are quite clear with the exception of No. 4, about which I felt a little difficulty and upon which I, therefore, had some talk with Mr. Tomlinson.

The difficulty was that the reports of the Engineers, to which you refer, go into the whole question of the Engineering in connection with the supply mains, and I was not sure whether you wished me to express an opinion upon these or to confine my attention solely to the question of the material of the suggested new main.

Mr. Tomlinson in answer to my enquiries informed me that my advice was desired only upon the latter point.

This being cleared up, I was in a position to consider the several questions put to me, and I will now endeavor to reply to them to the best of my ability.

No. 1 requires very few words. I can have no hesitation in saying that the time has arrived, when all Water Works Engineers must carefully consider the desirability of using steel when dealing with large mains, especially such as are to be subjected to high internal pressures.

I have had the subject in mind now for several years, keeping myself informed as experience accumulates, and especially in connection with the Birmingham Scheme (which received the sanction of Parliament this last Session) have I given the question careful attention.

No. 2.—On this point, *viz.*, the relative corrosibility of steel and cast-iron, the evidence I have been able to accumulate is very conflicting.

Experiments have been made on small pieces of steel under varying conditions by chemists and other experts at various times and places, but I cannot lay my hands on the record of any reliable investigations into the condition of uncoated steel pipes which have been conveying water under pressure for any considerable length of time.

I have seen the report of a Chemist of high standing in London, to the effect that steel, when exposed to the action, both of clean water and foul, is *less* affected by corrosion than cast-iron under similar conditions!

An American Engineer also testifies that wrought-iron and steel pipes fully exposed to the atmosphere show no sign of deterioration from rust after several years' working!!

The general consensus of opinion among Engineers does not coincide with these experiences, and I think it may fairly be assumed that the corrosibility of steel, exposed either to practically pure water or clean air, is about 12 per cent., say $\frac{1}{8}$th greater than that of cast-iron, and I suppose it is a fair assumption that the steel pipes proposed to be laid in your system will be subjected to these conditions.

I should, however, never think of using steel pipes which had not previously been protected from the action of the water internally and of the air externally by as perfect an artificial coating as it is possible to apply to them, and this point is raised in your question.

No. 3.—You ask if I think precautions can be taken, which will counterbalance the greater tendency to corrode of steel pipes as compared with cast-iron.

In reply I must say that there is no experience to justify the belief that any precautions in the way of coating would bring steel up to the same platform as cast-iron.

I think that any material which can be applied to steel can equally well be used upon cast-iron and I have no good ground for supposing that such material will adhere better to steel than to cast

iron, or that it will remain intact for a longer time on the one metal than on the other.

I believe therefore that once the protective coating is cracked, broken or removed so as to let either water or air operate on the bare metal, steel pipes would deteriorate by rusting more rapidly than would cast-iron pipes in the ratio before mentioned.

Bearing this in mind therefore and having regard to the much less thickness of steel than of iron in the same-sized pipe, and to the impracticability of adding to steel (because of cost) any really effective margin for corrosion, it is manifest that these pipes must be constantly prevented corroding by a skin of some material that will exclude both air and water.

With pipes of at least 4 feet in diameter laid above ground and thoroughly accessible, there ought to be little difficulty in ensuring this protection.

Such arrangements would have to be made as that the bearing surfaces could be exposed at intervals for examination and renewal of the coating if necessary.

This being done, the outside of the pipes, whilst requiring frequent and regular inspection, ought to give no real anxiety nor trouble because the slightest blemish would be observed and could be repaired at once.

The inside too could be examined at not infrequent periods, because there will be parallel with it, and usable as an alternative, the existing 48″ Tansa main, by means of which the supply could meanwhile be maintained.

Under these circumstances I believe the steel main may be preserved practically undeteriorated for a long term of years at slight cost, and as the Engineers have shown by their estimates a substantial saving in cost by the use of steel, and as I have checked these estimates and believe them to be sufficient, I have no hesitation in confirming their recommendations.

The question of the selection of coating material is obviously a very important one. It has been found by experience that what is known in England as Dr. Angus Smith's mixture, almost universally used here for the coating of water mains, does not give satisfaction in India for the coating of steel sleepers, and the opinion of an Engineer using them largely there is, that the surface of the steel is too smooth for proper adhesion. I am not clear, however, that this is good evidence that such mixture would not answer for steel water-pipes, for in them the conditions of user are by no means similar to that of sleepers.

I believe a simple mixture of tar, deprived of all its ammonia and water by distillation and pitch, would make a satisfactory protective coating and one that could be re-applied in detail if weak places develop themselves in working.

At the outset the pipes should be coated whilst perfectly free from rust by dipping into the mixture at a sufficiently high temperature.

Of course the experience which your Engineers already have had in connection with the existing cast-iron mains laid in the open may probably suggest some special treatment of this coating question which I

(unacquainted fully with local conditions) may not realise, and, if so, they will naturally act as that experience dictates.

The behaviour of the existing pipes in respect of expansion and contraction will probably influence their decision as to the form of joint to be adopted and whether it may be necessary to introduce special expansion joints at intervals.—I have, &c.,

JAMES MANSERGH,
Member of Council
of the Institution of Civil Engineers, &c., &c.

Mr. Tomlinson's Questions.

4, Eastwood Terrace,
Grange Over Sands,
29*th September* 1892.

JAMES MANSERGH, Esq.,
Mem. Council Inst. C. E.

Dear Sir,

Bombay Water.

As arranged I attended your Office on the 23rd instant, and after perusing your report so far as ready I discussed several points with Mr. Strachan, and it was arranged that I should submit some questions upon which, I think, it will be desirable to have your opinion. I regret that your illness prevented me from seeing you, but I hope to be more fortunate on the 5th or 6th proximo, when I shall be in Town prior to sailing on the latter date.

2. Perhaps the best way will be for me to state briefly how I should propose to lay the steel main; and for you to comment thereon.

3. The main will be entirely above ground (except at road-crossings, where it will be put inside a culvert still accessible); it will be carried on supports at distances equal to the width of the plates, *i.e.*, if 6 feet plates, 6 feet centre to centre of supports, or more or less as the plates should differ in width. The support to be under centre of each plate so as to be clear of trans-

Mr. Mansergh's Replies.

Westminster Chambers,
5, Victoria Street,
October 1*st*, 1892.

S. TOMLINSON, Esq.

Dear Sir,

I have considered the points raised in your letter of the 28th ultimo and will reply to them in the order set out therein.

Para. 3.—I agree that the main should be above ground and accessible, and that the supports should have a distance apart centre to centre, equal to the width of the plates, but not exceeding 6 feet. It would be better, however, to place the support under each joint. The rivets, which may be made with special heads for this purpose, would rest on the teakwood. This would, I

verse rivets. There will be a continuous bed, 4″ in thickness, of common concrete under the whole length of main. *Objects*:—To prevent splashing from earth and to collect, for evidence and guidance, any fallen coating or corroded matter.

4. The supports might be stone, cast-iron or teakwood. My first idea was cast-iron with a plate of asphalte between; but, as you think that in any case the part supported should be subjected to examination, I am inclined to agree with Mr. Strachan that teakwood will be most serviceable. It stands the climate well, and our men are used to it.

5. I understand your recommendation of tar and pitch for coating to be made after considering paints and in preference to them. I think we shall be able to do the tar and pitch coating effectively after experiments to adapt proportions to climate.

6. The plates to be of sufficient length to make one section, *i.e.*, only one longitudinal seam and after attaining this to be the widest that can be obtained, perhaps 6 feet. Is there any probability that by the time we want these pipes, it will be practicable to have the sections welded? If not, I suppose a double-rivetted lap joint must be used.

7. For the transverse joints I propose a cover strap, which appears to me to be the simplest arrangement obviating all bending of the plates required for a lap joint, allowing for the lines of longitudinal rivets to be continuous from section to section, reducing friction to a minimum, preserving a uniform internal shape though not quite a circle and affording the greatest facilities for think, facilitate the inspection of the plates at the support, and give greater stability to the main owing to the additional strength of the joint than could be obtained by supporting the shell of the pipe only. The concrete channel will be an advantage.

Para. 4.—I agree. The teakwood should have a width of bearing one inch less than the cover trap.

Para. 5.—I agree.

Para. 6.—I cannot say whether welding will be a practicable way of making the joints when you are ready to lay the main, and I am unable to estimate the probabilities of such being the case. I agree with the other parts of this paragraph.

Para. 7.—I agree, subject to the support being under the cover strap.

laying at first and for renewing, if ever required, any particular section. It would, to some extent, act as a stiffener between the points of support. It will add to the cost having four rows of rivets, but there would be the above pecuniary and other advantages to set against this.

8. Is it probable that the cost of plates would be greatly increased if they were required to be rolled thicker at the sides so that the transverse joints could be done with rivets countersunk inside with a view to reduce friction? Perhaps you would regard it on the whole to be better to secure this result by a fractional increase in general diameter.

Para. 8.—My answer to the second question is, yes.

9. Except in particular places, I propose to rivet up the sections as above except at 300 feet distances where an expansion joint would be provided. The minimum temperature of the water will be 74° F., the maximum 90° F. Should the pipe for any reason ever be emptied after completion (during construction precautions could be taken), the metal would be subject to the direct rays of the sun on a varying one half of the pipe: the thermometer might register 140° F. It appears doubtful, however, if this latter expansion would come on the expansion joint; the "other half" of the pipe would be in a shade not exceeding 92° F. probably not that; and, but perhaps I am wrong, I think the trouble would rather be with rivets than at the expansion joint.

Para. 9.—Before determining the distances at which the expansion joints should be placed apart, it would be well to see what actually occurs in the case of the exposed Tansa water main. The expansion joints cannot be required oftener than every 300 feet; it is quite possible a greater space may safely be used. On this point the experience at your hand will be the most reliable guide.

10. For internal inspection manholes would be provided at 500 feet intervals.

Para. 10.—I do not think 600 feet intervals too much for the inspection manholes.

11. To obviate the use of very large and costly valves and having regard to the very small loss of head caused by passing

Para. 11.—I agree.

through a valve of moderately reduced area, I should propose to use 2—32″ single door valves on cast-iron bifurcation of the steel main.

12. The only other point that occurs to me at present is the tests for the plates themselves. I am doubtful if we should be able to test the main except by having very large pumps, and I am afraid this requirement must be confined to maintenance of the main in good condition under the maximum static head which we can put upon it. For the plates I take it that tests for tensile strength, elongation, and behaviour in working hot and cold should be insisted upon, and the like, for all rivets. I am not sure that others should be insisted upon, but upon this very important point I am anxious for your assistance. The hot and cold bending tests appear to be fairly well agreed upon, but there appears to be difference on the requirements as to tensile strength and elongation.

13. I should be glad to receive your remarks on these points here if convenient to you, but, if not, I hope we may have the opportunity of discussing them together as above suggested. I am anxious not to miss another post and have not time to copy this. Could you oblige me by having a copy made?

Trusting you have had no return of your indisposition.

Para. 12.—I agree as to the testing of the main. The tests for the plates should be as follows :—Tenacity—between 26 and 29 tons per square inches ; extension—20 per cent. on a length of 10 inches at fracture ; cold test,—a strip rough sheared from the plates two inches broad should be bent double across a bar having radius equal to three times the thickness of the plate without cracking ; thickness—the variation should be within 2½ per cent. of that specified ; one plate from each set rolled from the same make of molten metal, or where the number so rolled exceeds 100, one plate for every hundred or part of a hundred should be tested.

The rivets should be soft steel made by the open hearth process with a tenacity between 26 to 29 tons per square inch ; an elongation of 25 per cent. in 10 inches at fracture.

I noticed that you estimated for pipes of diameters varying from 60 inches to 45 inches for the large steel main, and I understand the object of the decreasing diameters was to facilitate the nesting of the pipes on their outward journey so as to reduce cost of freight. It would be an advantage if the plates were sent from England and the work of making the main done in Bombay. In that case I think a uniform diameter for the main throughout would be preferable to the varying diameters.

(True Copy.)
S. TOMLINSON, M. INST. C.E.,
Deputy Executive Engineer
in charge Water Works.

*Resolved** : "That the Commissioner's letter No., 7088, dated 8th instant, be forwarded to the Corporation, with the recommendation that sanction be given to the grant, from surplus cash balance, of the equivalent of £262-10-0 sterling, being the amount of Mr. Mansergh's fee for advising the Municipality on the question of the relative merits of steel and iron water mains."

No. 8931.

Resolved : "That, as applied for by the Commissioner, in his letter No. 18098, dated 21st instant, sanction be given to the payment from the grant for Water Works contingencies to Mr. Tomlinson of £10-15-4, for charges for board and lodging and minor travelling expenses incurred in connection with the cost of his conferences in London with Mr. Mansergh on the question of the relative merits of steel and iron water mains."

No. 8932.

Considered letter No. 18206, dated 22nd instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to forward herewith copy of a letter from the Chief Accountant and to request sanction of the Standing Committee to the proposal made in his 4th para. I have also to request the sanction of the Standing Committee and Corporation to the proposal made in his last para.—I have, &c., H. A. ACWORTH, Commissioner.

No. 2822 of 1892-93.

BOMBAY, 21*st November* 1892.

SIR,—I have the honour to state that in our application to Government regarding the raising of the loan of Rs. 4½ lakhs for Fire Brigade quarters and stations, we had stated that Rs. 2½ lakhs of the loan would be raised between July and December 1892. We cannot, therefore, delay the raising of the latter sum beyond the end of next month.

2. I would, therefore, suggest that as we have already advanced up to date about Rs. 27,000 from our surplus balances to meet the expenditure actually incurred in connection with the above work, that sum be replaced by issuing debentures for an equal amount in favour of the surplus cash deposit account, as of date 23rd December 1892, and that the balance of the first instalment of the loan, viz., Rs. 2,23,000, be also invested in debentures of the same loan, as was done in the case of the last instalment of the Tansa Loan and the Municipal Building Loan, under the Municipal Solicitors' opinion, dated 22nd December 1891 (Standing Committee's Proceedings for 1891-92, page 468). These debentures can, whenever required, be utilized for replacing the advances that may hereafter be made from time to time for the construction of the Fire Brigade quarters and stations.

* This motion was *carried* by 9 votes against 1 vote.

3. By this arrangement we shall be able to get interest at 4 per cent. on the investment, instead of investing the money that may be realized by raising the amount of Rs. 2,23,000 in the public market, in 4 per cent. Government Paper or Port Trust Bonds or depositing it with the Bank of Bombay without interest.

4. If the above arrangements be approved of by you, may I request the favour of your obtaining sanction of the Standing Committee to the same as early as possible to enable me to arrange for the printing and issue of the debentures accordingly.

5. As there will be no premia available to meet the printing, stamp, &c., charges which will amount to about Rs. 1,400 on the debentures now proposed to be issued, will you also be good enough to obtain sanction of the Standing Committee and the Corporation to the above amount being met out of the provision of Rs. 11,250 made in the Fire Brigade Budget for the current year for payment of a half-year's interest on the instalment of Rs. 2½ lakhs, which will almost wholly be saved to us owing to the raising of the first instalment of the loan having been postponed until nearly the end of next month.—I have, &c.,—SORABJI NAVAROJI COOPER, Chief Accountant.

No. 8933.

Resolved : " That, as applied for by the Commissioner, in his letter No. 18206, dated 22nd instant, sanction be given to the following arrangements, as detailed in the Chief Accountant's letter to the Commissioner, No. 2822, dated 21st idem, regarding the raising of the first instalment of Rs. 2½ lakhs on account of the loan of 4½ lakhs for the Fire Brigade quarters and stations :—

" 1. The issue of debentures for Rs. 27,000 under date 23rd December 1892, in favour of the surplus cash deposit account.

" 2. The issue of debentures for the balance of Rs. 2,23,000 for the investment of the unexpended balance of the same loan.

" 2. That the Corporation be recommended to sanction the payment of Rs. 1,400 from the provision of Rs. 11,250 made in the Fire Brigade Budget for the current year (for payment of a half-year's interest on the instalment of 2½ lakhs) to meet the charges for printing, stamping, &c., the debentures of 2½ lakhs to be issued as above."

Considered the following :—

No. 16038 OF 1892-93, *24th October* 1892.

Copy forwarded to the Standing Committee for information with reference to their resolution No. 2614, dated 22nd June last.

H. A. ACWORTH, Commissioner.

30, ESPLANADE ROAD,
BOMBAY, 22*nd October* 1892.

To H. A. ACWORTH, Esq.,
Municipal Commissioner.

SIR,—Referring to your No. 6717, dated the 27th June last, and subsequent correspondence on the subject of the case for Counsel's opinion on the questions as to the legal position of the Standing Committee as regards calling for reports, we have the honor to forward herewith a copy of the case submitted by us to the Advocate-General, Mr. Lang, and of his opinion thereon, dated the 19th instant.—We have, &c.,

CRAWFORD, BURDER & Co.

BOMBAY MUNICIPALITY *ex-parte* THE STANDING COMMITTEE.

Re QUESTIONS AS TO RIGHT OF THE STANDING COMMITTEE TO CALL FOR REPORTS.

By a resolution of the Standing Committee, dated 22nd June 1892, it was resolved: "That the Municipal Commissioner be "requested to obtain and submit to the Committee as early as "practicable the opinion of the Advocate-General on the following "question, *viz.*: Whether the Standing Committee has the right "to call for reports from the Commissioner and through him from "other Municipal officers (1) on matters falling within the powers "and functions of the Committee; (2) on matters which come before "the Committee for consideration, disposal or report either on "reference to the Corporation or at the instance of the Commis-"sioner; and (3) generally as to the right of the Standing Com-"mittee to call for reports, information, returns, &c., from the Com-"missioner and other Municipal officers."

Sections 42 to 48 inclusive of the City of Bombay Municipal Act, 1888, deal with the constitution and appointment of the Standing Committee, the appointment of their Chairman, the retirement of the members by rotation, the replacing of members so retiring, the filling up of casual vacancies in the Committee and the duration of their office.

Section 49 contains provisions regulating the proceedings of the Standing Committee and empowers them (*inter alia*) to make such regulations as they think fit "with respect to the scrutiny of the "Municipal accounts," and provides [sub-clause (*n*)] that the Commissioner shall have the same right of being present at a meeting of the Standing Committee and of taking part in the discussions thereat as a member of the said Committee, but that he shall not be at liberty to vote upon or make any proposition at such meeting.

Section 64 provides [sub-section (1)] that "the respective functions "of the several Municipal authorities shall be such as are specific-"ally prescribed in or under this Act," and by sub-section (2)

declares that "except as in this Act otherwise expressly provided, "the Municipal Government of the City vests in the Corporation."

Sub-section (3) provides as follows :—"Subject, whenever it is in "this Act expressly so directed, to the approval or sanction of the "Corporation or the Standing Committee, and subject also to all "other restrictions, limitations and conditions imposed by this Act, "the entire executive power for the purpose of carrying out the "provisions of this Act vests in the Commissioner," who shall also perform and exercise certain special duties, powers and functions therein specified, and amongst others he is required [clause (*c*)] on the occurrence or threatened occurrence of any sudden accident or unforeseen event involving or likely to involve extensive damage to any property of the Corporation or danger to human life to take immediate action, "reporting forthwith to the Standing Committee "and to the Corporation when he has done so."

By section 65 the Corporation are expressly authorized to call for extracts from proceedings of the Standing Committee and for any return, statement, account or report connected with any matter with which the Standing Committee is empowered to deal.

Section 66 also expressly authorizes the Corporation to call on the Commissioner (*a*) to produce records and documents, (*b*) to furnish returns, statements, &c., and (*c*) "to furnish a report by "himself, or to obtain from any head of a department subordinate "to him and furnish with his own remarks thereon, a report upon "any subject concerning or connected with the administration of "this Act, or the Municipal government of the City."

The functions, duties and powers of the Standing Committee specifically prescribed by the Act, are (stated briefly) as follows :—

Section 21 (4).—Approval of fees prescribed by Commissioner for copies of Municipal Election Roll.

Section 28.—Approval of remuneration to polling officers, &c.

Section 59 (1) (*a*).—Assenting to grant of leave of absence to Commissioner.

Section 64 (3) (*c*).—Receiving reports of special measures and expenditure taken and incurred by the Commissioner in emergency.

Section 69 (*c*).—Approval of contracts involving more than Rs. 5,000.

(*d*).—Contracts for less to be reported to them.

Section 70 (2).—Common seal to be affixed in presence of two members.

Section 72 (3).—Authorizing contracts without inviting tenders.

Section 77.—Appointment of Municipal Secretary.

Section 78.—Appointment of Secretary's subordinate staff.

Section 79.—Sanctioning schedule of designations of officers and their salaries, &c.

Section 81.—Framing regulations for grant of leave to officers, &c., &c.

Section 83 (2) (*a*) & (*b*).—Approval of dismissal and suspension of certain officers.

Section 84 (2).—Granting leave to officers not appointed by Commissioner.

Section 90.—Approval of rates or prices of contracts for acquisition of immoveable property.

Section 91.—Approval of applications to Government to acquire under Land Acquisition Act.

Section 92 (*a*).—Leases of property of Corporation for not more than a year to be reported to them.

(*b*).—Sanctioning sales of property for less than Rs. 5,000 and leases for more than one but not more than 3 years.

Section 113.—All cheques to be signed by one member at least.

Section 114.—Approval of deposit of Municipal money at Banks or Agencies outside Bombay.

Section 116.—Members signing cheques under Section 113 to satisfy themselves that payment duly authorised.

Section 117.—Special expenditure by Commissioner for certain purposes to be communicated to them forthwith.

Section 122.—Sanctioning investment and disposal of surplus monies.

Section 123.—Prescribing manner and form of keeping accounts.

Section 124 (3).—Examination and review of Commissioner's Annual Report and Statements of Accounts.

Section 125.—Commissioner's estimates of expenditure, income, &c., to be laid before them.

Section 126.—Consideration of such estimates and power to require further detailed information from Commissioner.

Framing Budget Estimate.

Section 131.—Power to recommend increased or additional grants during an official year.

Section 132.—Sanction for expenditure of unexpended portions of grants.

Section 133.—Power during official year to reduce or transfer budget grants.

Section 134.—To represent to Corporation when circumstances show the necessity for re-adjusting or providing additional funds during an official year.

Section 135 (1.)—To conduct weekly scrutiny of Municipal accounts; (2) for this purpose to have access to all accounts, &c., and Commissioner to furnish them any explanation they may call for.

Section 137.—Auditors to report and furnish information to them.

Section 158 (2).—Power to prescribe general conditions in regard to allowance of $\frac{1}{5}$th drawback of general tax in certain cases.

Section 161 (2).—Power to prescribe fee for inspection and extracts from assessment book.

Section 169.—Power (*a*) to regulate cases in which water to be paid for by measurement instead of the water tax, (*b*) to approve composition of water tax, (2) to prescribe conditions in regard to use of water.

Section 170.—Power to prescribe rate at which water to be charged for to Government and Port Trust.

Section 172 (1).—Approval of special rates for levy of halalkhor tax in certain cases.

Section 185.—Appr val of composition with livery stable keepers, &c., in respect of tax on vehicles and animals.

Section 186.—Approval of fees to be prescribed by Commissioner for inspection and extracts from vehicles and animal tax book.

Section 195.—Approval of rules in respect of refund of town duties.

Section 213.—Approval of mode of management and control of collection, &c., of tolls and town duties.

Section 216.—Approval to writing off of irrecoverable taxes.

Section 223.—Approval to removal of buildings, &c., erected over Municipal drains.

Section 226 (2).—Approval to requisition for taking order for drains in alongside of or under streets.

Section 227 (*b*).—Approval of mode of connecting private street drains with Municipal drains.

Section 229.—Approval of demolition of drain connections made in contravention of the Act.

Section 230 (1).—Approval of authority to carry private drain through land of another.

(5).—Approval of requisition to divert such drain when land required for building.

Section 233.—Approval to the closing or limiting the use of existing private drains.

Section 238.—Approval of authority to person other than owner to use a drain.

Section 240.—Prescribing conditions in respect to drains passing beneath buildings.

Section 254.—Approval to opening or removal, &c., of parts of buildings for purposes of inspection of drains, &c.

Section 268.—Approval to removal of buildings, &c., over a Municipal water main.

Section 276.—Prescribing rent to be charged for use of Municipal water meters.

Section 279.—Approval to cutting off private water supply in certain cases.

Section 300.—Approval of requisitions to set forward buildings.

Section 303.—Approval of levels, direction, &c., fixed by Commissioner for new private streets.

Section 305.—Sanctioning requisitions to owners of premises adjoining private streets to level, metal, &c., such streets.

Section 335.—Approval of removal, &c., of buildings over Municipal gas pipes.

Section 344 (1).—Approval of fees prescribed by Commissioner for forms of building notices.

Section 348 (1) (*b*).—Assent to disapproval of new buildings inconsistent with provision of proper streets, position and direction of which not yet determined.

Section 351 (2).—Approval of buildings erected contrary to Act.

Section 352 (1).—Approval of requisition to open or pull down building work to ascertain if Act contravened.

Section 355 (2).—Approval of refusal to grant license as licensed surveyor.

Section 356.—Approval of regulations for guidance of licensed surveyors.

Section 357.—Prescribing fees to be paid to licensed surveyors.

Section 364.—Receiving weekly return of fires from Municipal Commissioner.

Section 377 (1).—Approval of requisition to take order with neglected private premises.

Section 381.—Approval of requisition to cleanse, fill up, &c., quarry-holes, &c.

Section 382.—Approval of requisition to discontinue, &c., dangerous quarrying.

Section 397 (2).—Approval of fees to be determined by Commissioner for use of washing places.

Section 403 (1) (*d*).—Approval to suspension of licenses for private markets.

Section 406.—Approval of market regulations.

Section 407 (*a*).—Approval of stallages,&c., in Municipal markets.
(*b*).—Approval of farming, do. do.
(*c*).—Approval of private sale of right of using stalls, &c.

Section 427 (1).—Approval of fees for disinfecting articles.

Section 493.—Approval of agreements for accepting expenses of works done for private persons by instalments.

Section 501.—Approval of payment of compensation not otherwise provided for on account of damage by reason of exercise of powers given by Act.

Section 517 (1) (*f*).—Approval of withdrawal or compromise of claims exceeding Rs. 500 for penalties under contracts.
(*h*).—Approval of admission or compromise of claims, suits, &c., against Corporation or Municipal officers.
(*i*).—Approval of institution of or withdrawal from or compromise of suits, &c., by Corporation or Municipal officers.
(*k*).—Obtain legal advice or assistance.

The functions of the Standing Committee as thus prescribed may apparently be summarized somewhat as follows :—

The scrutiny of Municipal accounts; the appointment of certain officers; assent to grant of leave to the Commissioner; the exercise of a control and supervision over Municipal contracts; over expenses of Municipal establishments; over acquisition of immoveable property; over disposal of Municipal property; over allowance of drawback of general tax; over certain fees; over remuneration to polling officers; over charges for water and halalkhor and vehicle and animal taxes in special cases; over the cutting off of water-supply in certain cases; over collection of certain tolls; over refund of town duties; over the writing off of irrecoverable taxes; over certain matters in connection with Municipal and private drains and removal of buildings over certain drains, water mains and gas-pipes and of buildings erected in contravention of the Act and of portions of buildings for inspection of drains; over licensed surveyors; over mode of dealing with neglected and dangerous premises in certain cases; over private and Municipal markets in certain matters; over payment of compensation not otherwise provided for; over mode of recovery of certain expenses; and over certain legal proceedings.

Primarily, it would seem the Standing Committee is a Finance Committee for the purpose of scrutinising and controlling the Municipal accounts, or of checking the Municipal revenue and expenditure and reporting thereon to the Corporation.

Secondly, the Standing Committee's duties are administrative within certain limits (see sections 77, 78, 81, 83 (2) (*b*), 84, 158, 169, 243, 357), and it has, it will be noticed, in some cases the power of initiating action, *e.g.*, the Standing Committee may suspend an officer (sec. 83) (*b*), it may recommend that a budget grant may be increased, or an additional budget grant made (sec. 131), it may reduce a budget grant (sec. 133), it may represent to the Corporation that the income of the year will not suffice to meet expenditure (sec. 134), and so on.

Thirdly, it is a Committee of control over the Commissioner by giving or withholding approval or sanction in respect of certain matters as to which in carrying on the duties and powers imposed and conferred on him by the Act, it would be impossible or inconvenient for him to refer to the Corporation as a body, to decide on such matters. In regard to some of their functions the Act, it will have been noticed, requires the Commissioner to report "or communicate" or give "detailed information" or "explanation" or furnish "weekly returns" to the Standing Committee, see sections 64 (3)(*c*), 69 (*d*), 92 (*a*), 117, 126 (1), 136 (2) and (364), and in so far as he is thus expressly directed to report, there can, of course, be no question as to the legal right of the Standing Committee to call on him to do so. As a matter of course, the Commis-

sioner always in such cases does report, and indeed in other matters coming before the Standing Committee in regard to which there is no such direction in the Act, he has always been ready to afford to the Standing Committee, whether in the shape of reports or otherwise, any information which they desire. There is no instance on record of the Commissioner having refused to furnish any report called for by the Standing Committee, and Counsel will understand that the present questions are submitted for his opinion not in consequence of any particular instance or case, but because it has been deemed desirable to ascertain the legal position of matters. But outside its distinct statutory functions, the Standing Committee also sometimes has to deal with a number of questions which arise either on references made by the Commissioner or references made by the Corporation. The second question is, whether in dealing with these, they have any legal right to call for reports.

Lastly, individual members of the Standing Committee often give notices of motion which either directly call for a report from the Commissioner or indirectly involve one. The third question is, whether there is any legal right in the Standing Committee to call for, or obligation on the Commissioner to furnish, such reports.

Section 66 (1) (*c*) of the Act, as has already been noticed, gives in distinct and express terms to the Corporation the power to call on the Commissioner to furnish a report "by himself or any head "of a department subordinate to him upon any subject concern- "ing or connected with the administration of this Act or the "Municipal government of the city," and this provision, coupled with the absence of any statutory provision expressly assigning a similar general power to the Standing Committee, has hitherto been regarded by the Commissioner as indicating that such power is not to be inferred from the general provisions of the Act determining the powers and functions of the Corporation or Standing Committee respectively; if this is not so, it has been suggested there would have been no need for the express enactment embodied in section 66 (1) (*c*) or for the express provisions already noticed, requiring the Commissioner to report, &c., to the Standing Committee in respect of certain specified matters.

Counsel is requested to advise whether the Standing Committee has the legal right to call for reports from the Commissioner and through him from other Municipal officers :—

Opinion.

I think the Standing Committee has not the legal right to require the Commissioner to furnish a report either by himself or by one of his subordinates in any case in which it is not expressly provided by the Act that a report is to be furnished

1. On matters falling within the powers and functions of the Committee other than those in respect of which reports are by the Act expressly provided for.

to it. The power of requiring the Commissioner to furnish a report is given by section 66 (*c*) to the Corporation, and if a report is required by the Standing Committee, which the Commissioner declines to furnish, the only course for the Standing Committee to adopt is to request the Corporation to call for it.

BASIL LANG.
19*th October* 1892.

2. On matters which come before the Committee for consideration, disposal or report, either on reference by the Corporation or at the instance of the Commissioner, and

3. Generally as to the right of the Standing Committee to call for reports, information, returns, &c., from the Commissioner and other Municipal officers.

Proposed by Abdalla M. Dharamsi, Esq., seconded by A. G. Viegas, Esq.—

"That the opinion of counsel be forwarded to the Corporation, with an expression of the Committee's opinion, that in order to an efficient discharge of their duties it is necessary that the Standing Committee should have the legal right to call for reports from the Commissioner in matter falling within their powers and functions. That the Corporation be requested to move Government to make an amendment to the above effect in the Municipal Act when the question of amending the Act is taken into consideration."

After discussion it was agreed that the consideration of this motion be postponed.

Read letter No. 17949, dated 18th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to state that the work executed by Mr. Dhanjibhai Framji of widening the banks of the approaches to the Bassein Creek bridge amounts to Rs. 4,218-5-8, the execution of a portion of which has already been reported, vide Standing Committee's resolution No. 6292 of 14th September 1892.

2. The work had to be undertaken for the safety of the banks at the Bassein Creek with consequent safety of the pipes thereon. If the work had not been promptly put in hand and carried on as found necessary, there might have been serious damage to the works, loss to the Municipality and interruption to the water supply. Besides, the work had to be carried on through the monsoon and it was not easy to say beforehand how much would be required. Consequently tenders for the work could not be invited before its commencement.

3. As the total cost of the work has exceeded Rs. 3,000, I have the honour to request, under section 72 (3) of the Act, the favour of the sanction of the Standing Committee to my having dispensed, for the above reason, with the invitation of tenders by public advertisement which would otherwise have been necessary.

4. The cost is debitable to the provision of one lakh for minor special works in connection with the construction of the Tansa Duct from the Dam to Ghatkopar.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 8934.

Resolved : " That letter to the Secretary, No. 17949, dated 18th instant, from the Commissioner, reporting that he entered into a further contract with Mr. Dhanjibhai Framji for widening the banks of the Bassein Creek bridge (Tansa water main bridge) to the debit of the provision of one lakh for minor special works in connection with the construction of the Tansa Duct from the dam to Ghat-koper, be *recorded.*

" 2. That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation of tenders, which would, otherwise, be necessary, as the work in question had to be undertaken for the safety of the banks of the creek with consequent safety of the pipes thereon, and that if the work had not been promptly put in hand, there might have been serious damage to the works, loss to the Municipality and interruption to the water supply."*

Resolved : " That the following be printed and circulated and brought on for consideration at the next

* At the meeting of the Standing Committee held on the 14th September last, the Commissioner reported that certain petty works along the duct had been entrusted to Mr. Dhanjibhai Framji at a cost of Rs. 1,746-1-1, part at the larger sum of Rs. 4,218-5-8, referred to above.

meeting :—Letter No. 17944, dated 18th instant, from the Commissioner, on the subject of the construction of the Wari Bandar overbridge."

Resolved : "That the following be printed and circulated and brought on for consideration at the next meeting:—Letter No. 18052, dated 21st instant, from the Commissioner, on the subject of the construction of the Falkland Road overbridge."

No. 8937. *Resolved* : "That Mr. H. J. Reubens, late sub-inspector, Drainage Department, be informed, with reference to his petition to the Chairman, that any complaints which applicant has to make with reference to his dismissal from the Municipal service must be addressed to the Commissioner.

"That copy of this resolution be submitted to the Corporation with reference to Mr. Reubens' letter to the President, dated 22nd instant."

The following return was read and *recorded* :—

No. 8938. Return of fires at DeLisle Road (Parel), Sewree Road (Bombay National Mill), Walkeshwar Road (Government House Compound), Victoria Bunder (Colaba), Chinchpoogly (Hongkong Mill) and Nagdevi Lane, forwarded with the Commissioner's memorandum No. 18071, dated 21st November 1892.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 20th November 1892.

The Budget Estimates for 1893-94 were further considered.

Streets and Buildings.

No. 8939. *Resolved* : "That the schedule of appointments framed, under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified, under section 79 (2), to allow of the following alterations being made therein :—Pay of the Head Clerk and Accountant increased, from Rs. 100 to Rs. 125 a

* *See* Appendix C. † *See* Appendix B.

month. Pay of one peon increased, from Rs. 6 to Rs. 8 a month. That the grant be passed at Rs. 87,917."

	Rs.	Rs.
Increases as above	324	
Add—Printing charges	500	
		824
Less—Decreases—		
Advertisements and contingencies	50	
Repairs to levels, &c.	50	
Purchase of books and periodicals	30	
Non-provision of peons' clothing	160	
		290
Net Increase	...Rs.	534

(*The grant for the current year is Rs.* 87,383.)

Public Lighting.

No. 8940. *Resolved*: "That, in sanctioning the full amount entered in the draft estimates for lighting, Rs. 3,21,410, and submitting the three schemes proposed by the Commissioner, the Standing Committee are of opinion that the Corporation itself should discuss and determine the relative merits of those schemes."

(*The grant for the current year is* Rs. 3,34,379.)

Road Watering.

No. 8941. *Resolved*: "That the schedule of appointments framed, under section 79 of the Municipal Act, as already sanctioned by the Standing Committee, be modified, under section 79 (2), to allow of the striking out of the appointments of 30 bhistees at Rs. 10 per month each and 20 pipe-men at Rs. 9-11-0 per month each.

"That the grant for road watering be passed at Rs. 77,744."

Decreases as above	Rs.	4,446
Less—Increase for hydrants	„	53
Net Decrease	Rs.	4,393

(*The grant for the current year is Rs.* 82,137.)

ROAD REPAIRS AND MAINTENANCE.

No. 8942. *Resolved* : " That the schedule of appointments, framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified, under section 79 (2), to allow of the following alterations being made therein, namely, the addition of the appointment of 15 machine mukadams on Rs. 12 each a month.

" The striking out of the following appointments from the schedule, viz. :—

70 Labourers on	Rs.	9	11	0 each a month.
20 Women on	„	5	13	0 do.
5 Boys on	„	5	13	0 do.
25 Scraping labourers on ...	„	8	0	0 do.

" That the grant for road repairs and maintenance be passed at Rs. 4,08,419."

Decreases—

As above...	Rs.	12,276
Purchase of road metal, &c.	„	17,500
Paving footpaths	„	25,000
Road sweeping machines	„	5,175
Road-scraping machines	„	2,550
Covering canopy of Queen's statue	„	275
		62,776

Less Increases—

As above	Rs.	2,160
Cart hire and bullock pairs	„	1,500
Ground rent...	„	65
Water-supply to chowkies	„	53
Stone-breaking machine	„	9,270
Telephone connections	„	600
		13,648
Net Decrease	Rs.	49,128

(*The grant for the current year is Rs.* 4,57,547.)

STREET IMPROVEMENT.

No. 8943. *Resolved* : " That the grant for street improvement be passed at Rs. 1,01,000."

Decrease—Purchase of tin plates and steel boards, Rs. 4,000.

(*The grant for the current year is Rs.* 1,05,000.)

The total grant for streets and buildings was passed at Rs. 9,96,490.

(*The grant for the current year is Rs.* 10,66,446.)

The grant for special provision for cleaning, lighting and repairing Port Trust wharves was passed at Rs. 38,812.

(*The grant for the current year is Rs.* 37,642.)

The total grant for Public Works, including General Supervision, Drainage, Water Works, Streets and Buildings, special provision for cleaning, lighting and repairing Port Trust wharves, was passed at Rs. 15,73,171.

(*The grant for the current year is Rs.* 16,35,587.)

Public Health Department—Detailed Statement No. 9.

General Supervision.—Resolved: "That the schedule of
No. 8944. appointments framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified, under section 79 (2) of the Act, to allow of the following alterations being made therein, *viz.*, of the appointment of one general and copying clerk on Rs. 30 a month, the wages of 2 peons being increased by Rs. 2 each a month, and the wages of the Havildar being increased by Re. 1 a month.

"That the grant for General Supervision be passed at Rs. 45,480."

Increase as above	Rs.	420
Increment to Assistant Health Officer within sanctioned limit	„	600
	Rs.	1,020
Less—		
Decrease on account of non-provision of peons' clothing...Rs.		280
Net Increase...Rs.		740

(*The grant for the current year is Rs.* 44,740.)

Conservancy Branch.—Resolved: "That the schedule of
No. 8945. appointments framed, under section 79 of the Act, already sanctioned by the Standing Committee, be modified, under section 97 (2), to allow of the following alterations being made therein:—

"The pay of the Veterinary Inspector to be Rs. 100 per mensem for long and approved service, instead of Rs. 80, and a personal allowance of Rs. 20.

"The wages of 440 cart-drivers to be increased by As. 8 each a month.

"The wages of 204 cart-drivers for surface drain cleaning to be increased by As. 8 each a month.

"The following appointments to be added to the schedule:—20 scavengers on Rs. 9 each a month; 10 scavenger women on Rs. 6 each a month.

"The appointment of 35 Halalkhors at Rs. 11-8-0 each a month for cleaning gully traps in newly sewered districts to be struck out of the schedule, these men having been transferred to the Drainage Department.

"That the grant for Conservancy Branch be passed at *Rs.* 6,59,023-4-7."

Increases—

	Rs.	a.	p.
In establishment as above...	6,744	0	0
Add—			
Rent of Port Trust land at Frere Road for disinfection chamber	360	0	0
Rent of land for Mahim Stable ground	72	0	0
Rent of land at Arthur Road	47	1	10
Municipal taxes on buildings in charge of the Health Department	300	0	0
Cumblies for scavengering and drain cleaning cart-drivers	966	0	0
	Rs. 8,489	1	10

Decreases—

In establishment as above	Rs. 4,830	0	0
1. Strength below maximum	„ 7,000	0	0
2 A. Do. do.	„ 1,500	0	0
B. Do. do.	„ 500	0	0
Cost of feed of bullocks for scavengering below the maximum strength ...	„ 1,500	0	0
Do. do. for drain cleaning	„ 1,500	0	0
Earth to cover Kutchra deposits, etc.	„ 2,880	0	0
Repairs to chawls, &c.	„ 13	0	0
Dust-bin moveable carts	„ 5,000	0	0
	Rs. 24,723	0	0
Deduct Increases	„ 8,489	1	1
Net Decrease	Rs. 16,233	14	2

(*The grant for the current year is Rs.* 6,75,257-2-9.)

Halalkhor Branch.—Resolved: "That the schedule of appointments framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified, under section 79 (2), to allow of the following alterations being made therein, *viz.*—

No. 8946.

"Of the appointment of 2 cart-drivers at Rs. 12 each a month; of the appointment of 9 Halalkhors at Rs. 11½ each a month.

"That the wages of 227 cart-drivers be increased by As. 8 each a month.

"That the grant for Halalkhor Branch be passed at Rs. 4,24,006-6-0."

Increases—

In establishment as above	Rs.	2,892
Feed of bullocks	„	504
Cumblies for drivers	„	345
Purchase of bullocks	„	300
Night-soil and cesspool carts	„	500
Spare pail carts	„	600
40 tubs	„	600
Rent of land, Queen's Road	„	1
Do. Grant Road	„	1
Total ...	Rs.	5,743

Decreases—

Strength of staff below maximum	Rs.	16,000
Cost of feed of bullocks below maximum strength	„	2,000
Water, plus rent of meters	„	7,137
Total ...	Rs.	25,137
Deduct Increases ...	„	5,743
Net Decrease ...	Rs	19,394

(*The grant for the current year is Rs.* 4,43,400-6-0.)

The total grant for Conservancy Branch, including Halalkhor Branch, was passed at Rs. 10,83,029-10-7.

(*The grant for the current year is Rs.* 11,18,657-8-9.)

Markets and Slaughter Houses.—Resolved : "That the schedule of appointments framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified, under section 79 (2), to allow of the following alterations being made therein, viz. :—

No. 8947.

"The appointment of an Inspector for private markets on Rs. 150 a month, plus Rs. 30 a month as conveyance allowance ; ditto of 4 peons on Rs. 12 each a month ; ditto 3 ditto on Rs. 10 a month; ditto 1 clerk on Rs. 25 a month for Municipal Markets; ditto 1 halalkhor at Rs. 11½ a month; ditto of 1 night-soil cart-driver at Rs. 12 a month for Bandora Slaughter-house latrine.

"That the rate of wages to the two halalkhors at present employed be reduced from Rs. 13 to Rs. 11½ per mensem each as per scale observed in the Health and Engineer's Departments.

"That the grant for Markets and Slaughter Houses be passed at Rs. 1,58,578-10-9."

Increases—

In establishment as above	Rs.	3,678	
Less—Decrease	„	36	
			Rs. 3,642

Add—

Lighting Markets and Slaughter Houses	Rs.	1,400
Renewal of meat-vans	„	9,490
Removal of offal	„	1,095
Purchase of stamping machine for weights and measures	„	2,000
Repairs to Markets and Slaughter Houses	„	9,108
	Rs.	26,735

Less Decrease—

Non-provision of peons' clothing ...	Rs.	624	
Water, plus rent of meters	„	477	
		„	1,101
Net Increase ...	Rs.		25,634

(*The grant for the current year is Rs.* 1,32,944-10-9.)

Registration of Births and Deaths.—Resolved: "That the schedule of appointments framed, under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified, under section 79 (2), to allow of the following alterations being made therein, viz.,—the appointment of an additional tabulating clerk on Rs. 20 a month and the appointment of a registration clerk for Sewri cemetery on Rs. 30 a month.

No. 8948.

"That the allowance of Rs. 10 a month to the Sewri Burial Board Clerk be *struck out* of the schedule as he has resigned the appointment.

"That the grant for registration of births and deaths be passed at Rs. 20,034."

Decreases—

Establishment as above	Rs.	120
Non-provision of clothing for 1 peon ...	„	24
Non-provision of clothing for Birth Registration Karkoons	„	936
Non-provision of clothing for Death Registration Karkoons	„	528
New leather bags, &c.	„	117
	Rs.	1,725

Less Increases—

Establishment as above	„	600
Net Decrease	Rs.	1,125

(*The grant for the current year is Rs.* 21,159.)

Cemeteries.—The grant for cemeteries was passed at Rs. 10,158-3-6.

(*The grant for the current year is Rs.* 10,255-3-6.)

Laboratory.—The grant for Laboratory was passed at Rs. 600.

(*The grant for the current year is the same.*)

Mahaluxmi Dhobiwada.—The grant for Mahaluxmi Dhobiwada, including Rs. 30,000 for water, was passed at Rs. 33,338.

No. 8951.

(*The grant for the current year is Rs.* 43,411.)

Infectious Diseases.—That the schedule of appointments, framed under section 79 of the Municipal Act, already sanctioned by the Standing Committee, be modified, under section 79 (2), to allow of the following alteration being made therein, *viz.*, the appointment of one attendant at the Frere Road disinfector at Rs. 12 a month.

No. 8952.

"That the grant for Infectious Diseases be passed at Rs. 6,000."

Decrease—		
Special measures in the event of an outbreak of epidemic diseases...	Rs.	6,394
Less		
Increase—		
On account of pay of an attendant as above..	„	144
Net Decrease	Rs.	6,250

(*The grant for the current year is Rs.* 12,250.)

Milch Cattle Stables and Rooms.—The grant for Milch Cattle Stables was passed at Rs. 11,240.

(*The grant for the current year is Rs.* 13,554.)

Tank Conservancy.—The grant for Tank Conservancy was passed at Rs. 6,144.

(*The grant for the current year is the same.*)

The grant for Public Health Department, including General Supervision and Conservancy, Markets and Slaughter Houses, Registration of Births and Deaths, Cemeteries, Laboratory, Dhobiwada, Infectious Diseases, Milch Cattle Stables and Rooms, Tank Conservancy, maintenance of Rastamji Jamshedji Dharamsala, Falkland Road, and contribution to Government for Vaccination was passed at Rs. 13,92,199-8-10.

(*The grant for the current year is Rs.* 14,21,312-7-0.)

The meeting adjourned at 5 P.M.

BOMBAY, 30*th November* 1892.

AT the meeting of the Standing Committee held this day, there were present—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKER YAJNIK, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; the CHIEF ACCOUNTANT; and the SECRETARY.

The minutes of the meeting held on the 23rd instant, were signed.

A letter to the Chairman, dated this day, was received from Mr. Kaikhosro N. Kabraji, apologizing for non-attendance on account of illness.

The seal of the Corporation was affixed to deed of contract with Messrs. Bhedwar & Co., for the construction of Connaught and Sussex Roads to the north of the Victoria Gardens.

No. 9170. *Resolved*: "That, as applied for by the Commissioner, in his memoranda Nos. 18449 to 18453, dated 26th instant, and No. 18537, dated 28th idem, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.		Where.
Mr. Anton Francis Cross	...Building	at No. 440, Khera Matunga.
„ Rustomji Cowasji Patel	... Do.	at Thakurdwar Road.
„ Gainu Ooka	... Do.	at Haines Road.
„ Sayana Saiboo	... Do.	at Kamathipura 1st Street.
Bai Angoo, widow of Phillip Pharan.	Do.	at No. 489, Khera Matunga.
Mr. Rustomji Cowasji Patel	... Do.	at Thakurdwar Road."

No. 9171. *Resolved*: "That sanction be given to the cutting off of water-connections as per list accompanying the Commissioner's memorandum No. 18744, dated this day."

It was agreed that the consideration of the proposed provision of telephonic communication on the Government telegraph lines, between Tansa and Bombay, be postponed, and that the papers in the matter be circulated to members of the Committee.

No. 9172. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 18444, dated 26th instant, and subject to the approval of the Corporation, under section 133 (2) of the Municipal Act,

sanction be given to the transfer of Rs. 800, from savings in the Drainage Branch, Section 2, Coals, D, Maintenance of Carnac Bandar Night-soil Pumping Station, Engineer's Budget, to same branch, new works, laying of a 4″ service main, including stand-pipe, and fixing 4″ meter to the Carnac Bandar Night-soil Depôt, same budget, to meet the cost of supplying and flushing the tanks at the depôt with fresh water instead of sea-water."

No. 9173. *Resolved* : "That, as recommended by the Commissioner, in his memorandum No. 18549, dated 28th instant, and under the Pension Rules, sanction be given to the payment of a pension of Rs. 37-8-0 per mensem, from 1st idem, to Mr. T. D. Oliveira, Clerk, Tansa Water Works Department."

No. 9174. *Resolved* : "That the following be *recorded* :—Letter No. 18442, dated 26th instant, from the Commissioner, reporting that he has sold to Mr. Mahomed Meghji the right of cultivating rice on 2 acres of Municipal land near Pawai engine house, for Rs. 16 for the current year, in addition to the 2 acres of land, the sale of the right to cultivate which has already been reported, *vide* the Standing Committee's resolution No. 3379, dated 6th July last."

No. 9175. *Resolved* : "That the following be *recorded* :—Letter No. 18244, dated 23rd November 1892, from the Commissioner, reporting, with reference to the Standing Committee's Resolution No. 3378, dated 6th July 1892 (recording the report of the purchase of a Fire Brigade brake from Messrs. Simpson & Co., at a cost of Rs. 1,543-14-0), that as they have declined to construct the brake in question, he has entrusted the work to Messrs. Stephens & Sons at a total cost of Rs. 1,450, against the budget grant of Rs. 2,500."

No. 9176. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 18443, dated 26th instant, sanction be given to the acceptance by him of the tender of Messrs. Hiraji, Nanabhai Spencer & Co., the lowest of six tenders received, for the construction of the Fire Brigade quarters in the Fort, amounting to Rs. 33,138. The cost to be debited to the grant of Rs. 36,201 provided for the work, included in the 4½ lakhs loan for the construction of Fire Brigade buildings."

No. 9177. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 18441, dated 26th instant, sanction be given, under section 69 (*e*) of the Municipal Act, to the variation of the contract with Messrs. Richardson & Cruddas, contractors for the construction of a shed over the pipe-cutting machine at Chinchpokli, so as to allow of their also putting in masonry foundation blocks for the pillars of the shed at a cost of Rs. 105."

No. 9178. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 18440, dated 26th instant, sanction be given, under section 21 (4) of the Municipal Act, to the charging of Rs. 2 per copy of the Election Roll which will come into operation from the 10th proximo."

No. 9179. *Resolved* : "That the following be *recorded* :—Memorandum No. 18220, dated 23rd instant, from the Commissioner, forwarding Government Resolution as under:—

No. 6338.

JUDICIAL DEPARTMENT.

Bombay Castle, 14th November 1892.

Letter from the Commissioner of Police, Bombay, No. 6399—40, dated the 10th October 1892—Forwarding a statement as noted in the margin, showing the Budget Estimate of expenditure on account of the Public Land Conveyance Licensing Department for 1893-94, and requesting the sanction of Government to the expenditure, as required by Section 62, Clause (*b*) of the City of Bombay Municipal Act III of 1888. Stating that the estimate has been entered in the Police Budget as desired by the Accountant General, Bombay.

	Rs.	Rs.
Establishment.		
1 Head Clerk (Rs. 65)	.. 780	
1 Clerk (Rs. 45)	.. 540	
1 Painter (Rs. 25)	.. 300	
1 Branding man (Rs. 12)	.. 144	
		1,764
Allowance.		
1 Deputy Commissioner (Rs. 75) ..	.. 900	
4 Police Inspectors (Rs. 40 each) ..	.. 1,920	
		2,820
Supplies and Services.		
Tin plates, brass badges, &c.		3,000
Contingencies.		
Stationery and printing	.. 1,200	
Miscellaneous	.. 500	
		1,700
Grand Total.. Rs.		9,284

RESOLUTION.—The Budget Estimate submitted by the Commissioner of Police, Bombay, is sanctioned.

C. H. A. HILL,
Under Secretary to Government."

No. 18220 OF 1892-93.

BOMBAY, 23*rd November* 1893.

Copy forwarded for information to the Standing Committee.

H. A. ACWORTH,
Commissioner.

No. 9180. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 18323, dated 24th instant, sanction be given, under section 185 of the Municipal Act, to his compounding with Mr. Abdulla Valab bin Ahmed Misari for a sum of Rs. 58-5-4, from 1st November 1892 (the date of the opening of a new commission stables in E Ward, properties Nos. 3316-21, 3325-27 and 3826, Bellasis Road, containing accommodation for 280 horses), to 31st March 1893, in lieu of the tax which he would otherwise be liable to pay under section 180 of the Act."

No. 9181. *Resolved* : "That the following be referred to the Commissioner, in continuation of the Standing Committee's Resolution No 7092, dated 5th October 1892:—Further letter, dated 24th instant, from Mr. C. B. D'Abreo, on the subject of the condition of the Agar Market at Dadar. That the applicant be informed accordingly."

The consideration of motion moved on the 23rd instant, by Mr. Abdalla M. Dharamsi, on the question of the right of the Committee to call for reports from the Commissioner, was postponed.

The consideration of letters Nos. 7944 and 18052, dated 18th and 21st instant, from the Commissioner, on the subject of the construction of overbridges at Wari Bandar and Falkland Road, was postponed.

The following return was read and *recorded* :—

No. 9182. Return of fires at Samuel Street (Khoja Mohla), Arthur Road, and Lascars' Line (Lower Colaba), forwarded with the Commissioner's memorandum No. 18533, dated 28th November 1892.*

The following statement † was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 27th November 1892.

* *See* Appendix C. † *See* Appendix B.

The Commissioner informed the Committee that in consequence of differences between the persons to whom compensation has been awarded for the land taken up for the Pawai Water Works, the District Court of Thana has decided that the money paid into Court by the Municipality under the awards must be returned to the Municipality and retained by them until the litigation in question is settled, interest at the rate of 6 per cent. being payable by the Municipality on the total sum awarded to the litigants from the date of the acquisition of the land until final settlement of the disputes between the persons to whom the money was awarded.

The amount in question, Rs. 1,42,391-2-7, had therefore been received back by him, and he proposed to pay the same to the Bank of Bombay to the credit of the Municipal Fund, and to draw on it when required in order to obviate the necessity of selling out invested funds of an equal amount which will be required to be drawn on before the end of the financial year. Moreover at the present high rate of stock in the market, it would not be worth while to purchase paper only required for a short period.

The Committee expressed their concurrence with the Commissioner.

THE CONSIDERATION OF THE BUDGET ESTIMATES FOR 1893-94 WAS PROCEEDED WITH.

Referring to the resolution No. 6521, dated 21st September 1892, of the Standing Committee, the Commissioner informed the Committee that it is found impracticable to give in January the actuals for the nine months' income and expenditure for the current year plus estimates for the three remaining months, and said that he could only furnish actuals for the eight months preceding, and that the other four months must be merely estimates.

Municipal Debt.—The estimate of expenditure for the several public loans, sinking funds and interest thereon, was passed at Rs. 21,44,162.

(*The grant for the current year is Rs.* 21,68,277-4-10.)

Pensions, Gratuities and Compassionate Allowance.—This grant was passed at Rs. 31,000.

(*The grant for the current year is Rs.* 33,000.)

Before proceeding with the next item, the estimates of Police charges, the following letter was read:—

No. 6696 OF 1892.

JUDICIAL DEPARTMENT,
BOMBAY CASTLE, *28th November* 1892.

To THE PRESIDENT, MUNICIPAL CORPORATION,
Bombay.

SIR,—I am directed to acknowledge the receipt of your letter No. 2104, dated the 11th June 1892, expressing the hope that Government will not enhance the proportion of the annual cost of the City Police, which the Municipality has been paying for so many years, until the question of the proposed increase to the City Police is finally settled. You further add that, without being furnished with detailed particulars, the Municipality cannot judge what is the further amount claimed by the Government.

2. In reply I am directed to recall your attention to letter No. 1832, dated the 25th of March 1891, which warned the Corporation that on the assumption of the additional Police being sanctioned their liability would be 4½ lakhs. In a subsequent letter No. 6333, dated November 30th, 1891, I was directed to state that on the determination of the final details of the scheme and its sanction by the Secretary of State, you would be informed of the exact amount, which the Corporation would be required to contribute. For your guidance I added "the Governor in Council proposes for the present to fix the Government contribution at the maximum permitted by the Government of India, *viz.*, one-fourth of the annual net charges." To this proposition the Governor in Council received no immediate reply, and accordingly I addressed you again on the 18th of May 1892, in my letter No. 2599, and conveyed to you, by direction of the Government, in the following terms, a formal requisition as to the share which the Municipality must pay :—"I am, in accordance with section 62, Bombay Act III of 1888, to inform the Corporation that the proportion of the annual expenses of the City Police, which they are called upon to defray in the current year, will be the difference between the actual charges of the Police for the year, and the sum of Rs. 90,000, in addition to Rs. 10,463 representing the charges which the Municipality has accepted on the account of the Queen's Statue and the Victoria and Albert Museum in lieu of Police charges." I added that, when the re-organization was settled, the proportion would then be fixed as already intimated in my letter No. 6333, dated November 30th, 1891.

3. The Corporation having then received full notice, with direct reference to their statutory obligation, of the contribution required, I explained to the Commissioner in my letter No. 4570, dated August 23rd, 1892, that a monthly contribution of Rs. 30,278-12-0

would represent the proportion fixed, subject, however, to adjustment when the actual expenditure was known. I am now to forward, for the information of the Corporation, the estimates on which this requisition was based. It will be observed that the receipts on account of private watchmen and ramosis exceed the expenditure, but in the opinion of Government the Municipality is entitled to benefit by the excess. On the other hand, there are recoveries on account of pension which at the annual adjustment will belong to Government, since they at present pay pension charges. These, however, only indicate matters of detail capable of easy adjustment by the Accountant General, and the estimated charge per mensem, Rs. 30,278-12-0, will, it is believed, represent as nearly as possible the actuals: Inasmuch as the Corporation is still continuing to pay only Rs. 20,502-12-7 a month, instead of the larger proportion which was intimated to you in May last, I am to request that the deficiency may be made good with as little delay as possible.—I have, &c.,—W. LEE-WARNER, Secretary to Government.

Accompaniment to letter No. 6696, as above :—

		Rs.	Rs.
(1)	Superintendence, *i. e.*, Commissioner of Police, Deputy Commissioner, &c., &c., and their office establishment with contingencies	46,349	
(2)	Superintendents of Police and Police Constables with their contingencies	3,78,170	
(3)	Cattle-pound charges	4,872	
(4)	River, Harbour or Marine Police	32,651	
(5)	Dockyard Police	17,800	
(6)	Guards for Public Buildings	13,561	
(7)	Private watchmen and Ramosis	74,300	
(8)	Port Trust Establishment	18,746	
(9)	University Police	548	
(10)	Hospital charges	7,811	
			5,94,808
Deduct—Recoveries—			
(1)	Bombay Port Trust contribution towards Harbour Police	16,500	
(2)	Port Trust contribution towards Victoria and Prince's Dock Police...	23,500	
(3)	Contribution from the University ...	680	
(4)	Private watchmen and Ramosis ...	82,000	
(5)	Cattle-pound	7,670	
(6)	Miscellaneous	650	
			1,31,000
		Net Rs.	4,63,808
Deduct—			
	Contribution by Government	90,000	
	Special contribution in lieu of the Victoria and Albert Museum maintained by the Municipality	10,463	
			1,00,463
		Rs.....	3,63,345

It was pointed out to the Committee, that the figures entered in the Budget Estimates are the same as those given in the accompaniment to the above letter, and it was agreed that the estimate be passed accordingly, it being left to the Corporation to take any steps that may be considered desirable with reference to certain items in such accompaniment.

(*The grant for the current year is Rs.* 4,00,000.)

Education.—The grant for Education was passed as under :—

Primary Education		58,532
Medical Female Scholarships		1,000
		59,532
School for Deaf and Dumb Mutes		1,800
		61,332
Veterinary College		2,500
Victoria and Albert Museum		*11,200
Victoria Jubilee Technical Institute		10,000
Joint Schools Committee establishment		6,000
Total ... Rs.		91,032

(*The grant for the current year is Rs.* 87,720.)

Hospitals.—The estimate of expenditure in respect of Hospitals was passed at Rs. 60,108 as per margin.

	Rs.
Goculdas Tejpal Hospital..	36,000
Establishment for proposed Small-pox and Cholera Hospitals	3,108
Jaffar Sulliman Dispensary for Women and Children	3,000
Leper Asylum Maintenance	18,000
Total..Rs.	60,103

(*The grant for the current year is the same.*)

Discretional Contingencies.—The grant for discretional contingencies was passed at Rs. 7,000.

(*The grant for the current year is the same.*)

Auditors' Allowance.—The grant for Auditors' allowance was passed at Rs. 10,000.

(*The grant for the current year is the same.*)

Election Expenses.—The grant for election expenses was passed at Rs. 500.

(*The grant for the current year is the same.*)

Municipal Buildings Fire Insurance Fund.—The grant for Municipal Buildings Fire Insurance Fund was passed at Rs. 3,000.

(*The grant for the current year is the same.*)

* Including Rs. 5,400 for establishment as per Schedule statement No. 8, Rs. 26 for water supply and hire of a metre, and Rs. 413 for repairs to the Museum building.

New Works.—Detailed Statement No. 12—costing Rs. 20,000 each as under :—

Resolved : " That new works for 1893-94 in respect of drainage be passed as under :—

Drainage.

	Rs.	Rs.
Engraving numbers on manhole covers	290	
Constructing 7 manholes with covers and frames in Kolsa Street	484	
Two square manholes on Queen's Road Sewer ...	600	
Erecting metal vent shafts in Abdul Rahiman Street	2,077	
Constructing a Chauki for the Chief Inspector of Drains at Foras Road	2,474	
Construction of Miscellaneous Drains	5,000	
		10,925

Water Works Department.

Filling up and metalling the new ground at Chinchpokli junction of DeLisle and Clerk Roads ...	2,882	
		2,882
		13,807

Streets and Buildings.

Providing latrine and urinal to the Engineer's Office, A Ward	500	
Making of streets which have become public under the Municipal Act	5,000	
Foot-bridge over the G. I. P. Railway at Byculla on the road from Parel Road to the junction of DeLisle and Haines Roads	10,943	
Construction of a road across Khandia Tank in extension of Khandia Street	4,637	
Chaukis for depôt Mukadams, A-3, B-4, C-1, D-3, E-4, F-3, and G-3, in all 21, at Rs. 80 each ...	1,680	
Fencing the ground of metal depôts at Sonapur ...	2,000	
Paving round the statuary and constructing ornamental wrought-iron fencing to the same in front of the new Municipal building, and constructing fencing with gates, walls, &c., on the north side of the private road to the north of the building...	7,276	
		45,843

Sanitary and Miscellaneous Works.

Construction of detached Pork-shop at the Pedder Market	1,354	
Latrine for grave diggers' chawl, Arthur Road ...	200	
Latrine at Bullock Hospital, Sankli Road	184	
Constructing a 12-chamber latrine at Warli, Middle Pakhadi	3,010	
Constructing a 12-chamber latrine at Warli Pakhadi	2,240	
Latrines and Urinals	12,000*	
Filling in compound of the Small-Pox Hospital at Arthur Road and constructing a slab drain ...	6,631	
Paving and V-draining the van siding behind the Sheep and Cattle Slaughter houses at Bandra ...	9,830	
		35,449
Total ...Rs.		81,292

* Proposed by Abdulla M. Dharamsi, Esq., seconded by Javerilal U. Yajnik, Esq.,— "That the item for latrines and urinals be deleted, it being left to the Commissioner to apply for grants for such work from time to time as may be considered necessary. After discussion Mr. Dharamsi withdrew his motion.

The total grant, including Rs. 81,292 for special extraordinary works and Rs. 29,800* for investment of interest realised on Sinking and Insurance Funds investments was passed at Rs. 64,40,068, being a net decrease of Rs. 1,92,910.

The grand total of the estimated expenditure for the year, including Rs. 13,05,752, balance at the close of the year, amounts to Rs. 77,45,820.

(*The grant for the current year is Rs.* 75,50,317.)

Loan Funds.—The estimate of receipts for the year 1893-94 from Loan Funds, as per statement No. 13, including the anticipated balance on 1st April 1893, of Rs. 1,98,992-10-6, was passed at Rs. 24,58,992-10-6.

The expenditure on account of Loan Funds as per the same statement, including closing balance on 31st March 1894, of Rs. 1,70,356-6-7, was passed at Rs. 24,58,992-10-6.

The pay of establishment chargeable to Loan Funds shown in the same statement was passed at Rs. 81,278.

Proposed by the Chairman, seconded by Colonel Wilson—

"That the pay of the Drainage Engineer on special duty be entered at a sum not exceeding Rs. 1,500 per mensem, the cost being debited proportionally to the various loan for Drainage Works."

Amendment moved by A. G. Viegas, Esq.—

"That the salary of the Drainage Engineer on special duty be entered at Rs. 1,200 per mensem."

Not seconded.

The motion was *carried.*

Resolved: "That the Corporation be recommended to sanction the following appointments in connection with the loan works budget :—

1 Drainage Engineer on special duty on Rs. 1,500 per mensem, covering storage basin, Bhandarwada Reservoir, and constructing filters over it.

1 Inspector on Rs. 300 a month.

New Distribution Mains.

1 Superintendent on Rs. 250 a month.

Sewerage of Colaba.

1 Chief Inspector on Rs. 250 a month, *plus* Rs. 50 as conveyance allowance.

It was *resolved* : That the sum of Rs. 120 be added to the grant for the Corporation and Standing Committee's establishment to provide for the salaries of the second and third clerks being increased by Rs. 5 each per mensem.

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* Sinking Fund ... ... Rs. 29,250
Municipal Buildings Fire Insurance Fund ... ... „ 550
Rs. 29,800

BOMBAY, *7th December* 1892.

AT the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE Mr. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting, held on the 30th ultimo, were signed.

No. 9483. The seal of the Corporation was affixed to deed of agreement between Mr. Jamasji Ruttonji Mistri and the Corporation, securing to the Municipality the right to acquire, at any future time, the set-back of property at No. 13, Nanabhoy Lane, without payment of any compensation in respect of the unauthorised work, indicated on the plan annexed to the deed and at the rate of Rs. 20 per square yard, for any land shown on the plan, scored red, to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition.

The seal was also affixed to an agreement (in duplicate) with the Bombay Telephone Company, for five years, from the 28th ultimo, of the right to set up, conduct, maintain and use telephone wires, in, through or over the public streets of the City on the same terms and conditions as those contained in the present agreement, which expired on the 27th idem.

The seal was also affixed to deed of contract with Hadji Kassum & Co., for the supply of clothing to the Municipal havildars and peons.

The seal was also affixed (1) to two attested duplicate debentures of the Tansa Water Works Loan, Nos. 781 and 15009, of Rs. 500 each; (2) to three attested duplicate debentures of the Sanitary Works Loan of 1885, Nos. 27 J, 28 J, and 3304 N.N., of Rs. 500 each; (3) to one consolidated debenture of the Sanitary Works Loan of 1885, Nos. 215-42 J, of Rs. 14,000; and (4) to fifteen debentures of the Tansa Water Works Loan, Nos. 21401-600 to 24201-400, of one lakh each.

No. 9484. *Resolved* : " That, as applied for by the Commissioner in his memoranda Nos. 19001 to 19003, dated 3rd instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Govind Somwar ...	...Building at Agarwada, Matunga.
„ Kanji Megji	... Do. at Pedder Road.
„ Mahomed Hadji Salay Mahomed	Do. at Mori Road."

No. 9485. *Resolved* : " That sanction be given to the cutting off of water connections as per list accompanying the Commissioner's memorandum No. 19238, dated this day."

The draft introductory remarks to the budget estimates, 1893-94, which had previously been circulated, were considered and approved after the striking out of the word " only " from between the words " to " and " three lakhs."

The consideration of the question of the proposed provision of telephonic communication between Tansa and Bombay was postponed till next week.

No. 9487. *Resolved* : " That the following be *recorded* :—Letter No. 18849, dated 1st instant, from the Commissioner, reporting, with reference to the Standing Committee's Resolution No. 5493, dated 24th August last (sanctioning the purchase of 500 tons Brymbo's Hartley coal at Rs. 16-12-0 per ton from Messrs. Killick, Nixon and Co., to be delivered at the Love Grove Pumping Station), that the actual quantity delivered was 500 tons 6 cwt. 2 qrs."

No. 9488. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 18754, dated 30th ultimo, sanction be given to the acceptance by him of the tender of Messrs. Mistri Bhedwar, Vachagandy & Co., the lowest of six tenders received, for the construction of a masonry bridge over the old main drain at Authur Road, at a cost of Rs. 14,489, chargeable to the grant of Rs. 18,000, sanctioned by the Corporation, in their Resolution No. 11358, dated 14th January last."

No. 9489 *Resolved* (by 11 votes *against* one vote) : " That, as applied for by the Commissioner, in his letter No. 18961, dated 2nd instant, sanction be given to

the acceptance by him of the tender of Messrs. John Fleming & Co., the only tender received, for the supply of disinfectants during the year 1893-94, at the following rates :—

Calvert's Carbolic Acid Powder at Rs. 19-6-0 per cask.
Sanitas at Rs. 20-0-0 per cask.
Calvert's Carbolic Acid at Rs. 3-6-0 per gallon.
Do. Cresol at Rs. 2-14-0 per gallon.
Phenyle at Rs. 4-5-0 per gallon."

In reference to a request made by Mr. Viegas the Commissioner said he would furnish the Committee with a report from the Health Officer as to the reasons for restricting the powder used, to "Calvert's," and as to the objections, if any, to using powder made by other manufacturers.

No. 9490. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 19026, dated 3rd instant, sanction be given to the acceptance by him of the tender of Messrs. Gangaram Luxumon & Co., the lower of the two tenders received, for the construction of Manual Fire Brigade Station at Pedder Market, Mazagon, at a cost of Rs. 7,018-12-0, the charge to be met out of the 4½ lakhs loan for the erection of Fire Brigade Stations in the City."

No. 9491. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 18745, dated 30th ultimo, sanction be given to the variation of the contract with Messrs. Richardson & Cruddas, contractors for the supply of thirteen complete sets of tidal flaps and two balance valves, so as to allow of their supplying thirteen suitable lifting gears at Rs. 105, or Rs. 1,365, *plus* Rs. 40, for cost of pattern. The charge to be debited to the grant for Rs. 14,000, provided in the Loan Works Budget for sewer flushing arrangements."

No. 9492. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 19116, dated 5th instant, sanction be given, under section 230 of the Municipal Act, to the issue of an order in writing to the Hon'ble Mr. Fazulbhoy Visram, authorising him to lay a drain for his premises, opposite Lal Bagh, Parel, into, through or under the land belonging or alleged to belong to Mr. Mangaldas Tapidas, to the Municipal sewer at Arthur Road."

Resolved : "That, as recommended by the Municipal Secretary, sanction be given to one month's privilege leave being granted (1) to Mr. L. W. Michael, Office Manager, Corporation and Standing Committee's Office, from 24th ultimo, and (2) to Mr. Narayen R. Damlè, clerk in ditto, from 9th December 1892.

No. 9493.

"That sanction be also given to the employment of two clerks for one month, at the rates of Rs. 25 and Rs. 50 per mensem, respectively, the charge to be met from savings in section III, fees payable to Members of the Committee."

Resolved : "That, as applied for by the Commissioner, in his letter No. 18960, dated 2nd instant, sanction be given to the purchase, from Messrs. Glenfield & Co., Kilmarnock, Scotland, of spindles and nuts for sluice valves and fire hydrants, Water Works Department, as per list submitted therewith, at the rate of 1 shilling and 3 pence per pound net, and at a total cost of Rs. 4,973-1-7 or thereabout, debitable to the sanctioned advance for the purchase of stores for Water Works maintenance, and subsequently to be adjusted against the proper grants when used."

No. 9494.

Resolved : "That, as applied for by the Commissioner, in his letter No. 18962, dated 2nd instant, the Standing Committee hereby approve, under the terms of section 185 of the Municipal Act, of his compounding with the owners of licensed public conveyances for the payment of wheel-tax for the calendar year 1893, on the following terms :—

No. 9495.

"For each labour cart with one pair of bullocks, Rs. 20 per annum ; the monsoon quarter (July, August and September) not to be charged for.

"For each victoria and two horses, Rs. 63 for the whole year ; no deduction to be allowed for the monsoon months.

"For each reckla with one pair of bullocks, Rs. 20 for the whole year ; no deduction to be allowed for the monsoon months."

Resolved : "That, as applied for by the Commissioner, in his letter No. 19029, dated 3rd instant, sanction be given, under section 517 (*j*) of the Municipal Act, to the filing of suits in the Court of Small Causes, for the recovery of Rs. 590-2-8, being the amount of law charges for agreements for acquiring set-

No. 9496.

back ground, (1) from Bai Godavaribai, owner of a house at Bhuleshwar Road, Rs. 290; (2) from Mr. Keshavlal R. Chowksey, owner of a house at Kumbhar Lane, Rs. 142-10-8; and (3) from Hadji Abdsatar Hadji Oomer, owner of a house at Chinch Bandar 1st Row, Rs. 157-8-0."

No. 9497. *Resolved:* "That, as applied for by the Commissioner, in his letter No. 19027, dated 3rd instant, sanction be given, under section 172 (2) of the Municipal Act, to the Government properties as per list submitted therewith, being charged the special halalkhor rates as per amount shown against each property."

No. 9498. *Resolved:* "That, in reply to their letter, dated 1st ultimo, on behalf of Messrs. Ruttonsey Poonsey and Malsi Assa, Trustees of the Visa Oswal Temple at No. 554 A, Dongri Street, Messrs. Mulji and Raghaoji be informed that the Commissioner reports that no opportunity has ever been given by their clients to the Water Works Department to test the consumption of water by the fixing of a meter, as the Trustees decline to have a meter fixed. The only legal charge, therefore, for the water consumed, is the tax on value and no refund can, under the circumstances, be allowed to them."

No. 9499. *Resolved:* "That the following be referred to the Commissioner for favour of remarks:—Letter to the Chairman, dated 29th ultimo, from Dr. D. A. D'Monte, submitting, for consideration, proposal as regards the quarry-hole nuisance at Dadar, Mahim, Parel and Worli."

It was agreed that the consideration of memorandum No. 16038, dated 24th October 1892, from the Commissioner, forwarding counsel's opinion on the question of the legal position of the Standing Committee, as regards calling for reports, &c., and motion moved thereon by Abdalla M. Dharamsi, Esq., seconded by A. G. Viegas, Esq., on the 23rd ultimo, be postponed and that the same be transferred to the list of outstanding business.

No. 9500. After discussion it was also agreed that the consideration of the Commissioner's letter No. 17944, regarding the Wari Bander overbridge, be postponed until next meeting, the Commissioner agreeing to place before the meeting, if feasible, more detailed information from the Assessor and Collector as to the rentals of the properties

on the line of the proposed overbridge which will probably have to be taken up at Municipal expense.

No. 9501. After discussion, it was agreed that the following report be forwarded to the Corporation :—

With reference to the Corporation's resolutions as per margin regarding the construction of an overbridge at Falkland Road, the Standing Committee, in reporting thereon, beg to forward letter No. 18052, dated 21st ultimo, from the Commissioner, together with the accompaniments thereto, from which it appears that, so far as can be foreseen, the expense falling on the Municipality will be less than Rs. 22,000. There may, however, be an additional charge of Rs. 3,000 for removing and relaying water mains, beyond the charge of Rs. 16,600 mentioned by the Commissioner.

"That the following be fowarded to the Standing Committee and the Commissioner for report as to whether, in
No. 7369. the event of an overbridge of 45 feet width only being constructed, the outlay on the part of the Corporation can be restricted to Rs. 22,000* or even less, it being stipulated that, with a bridge of that width only, no tramway will be allowed to be carried across the bridge :—Government Resolution No. 1774, P. W. Department (Railway), dated 18th August 1891, on the question of Municipal contribution in connection with the proposed Falkland Road overbridge, stating that Government is not prepared to accept any further liability beyond the Rs. 22,000 promised by the Corporation for the acquisition of land for the approaches of the said overbridge, but suggesting that, if a bridge of 45 feet in width only is erected, it would probably be ample to meet the requirements of the traffic to be served, and possibly bring the cost of the land within the amount set apart for this purpose."

"That Government Resolution No. 1876, P. W. Department (Railway), dated 26th September 1892, on the sub-
No. 7935 ject of the construction of overbridge at Falkland Road, be forwarded to the Standing Committee and the Commissioner in continuation of the Corporation's Resolutions No. 7369, dated 8th October 1891, and No. 3814, dated 14th July 1892."

No. 18052 OF 1892-93.

BOMBAY, 21*st November* 1892.

THE MUNICIPAL SECRETARY.

SIR,—With reference to the Standing Committee Resolution No. 7414 of 14th October 1891, and to Government Resolutions No. 1774 of 18th August 1891, and No. 1876 of 26th September 1892, in the Railway Department, I have the honor to forward the plans prepared by the Railway Engineers for a bridge 45′ in width at Falkland Road, and an estimate by the Executive Engineer, Municipality, amounting to Rs. 16,600, for land and buildings to be acquired by the Municipality. In this estimate Rs. 3,000 have been provided against claims on account of severance, but this is, and cannot but be, an uncertain item. As far as I can conjecture, the sum to be paid by the Municipality is not likely to be as much as Rs. 22,000, but I have received a claim for compensation from Mr. Sivlal Motilal, owner of a house, which will abut on one of the low level roads, on account of depreciation of his property in value due to the abutment of the bridge, 16′ in height, being raised opposite

to it. Unless the construction of the bridge interferes with the light and air of this and other similar properties, and this it will not do, I am advised by our solicitors that this claim has no sound basis, and may confidently be disregarded. On the whole, therefore, I think it unlikely that in committing themselves to the acquisition of the properties estimated for by the Executive Engineer, the Corporation will be exposed to a liability equal to Rs. 22,000, which they have expressed their willingness to bear. But there are always elements of risk and uncertainty in such transactions, and I think no one can give any positive assurance on the point. I would suggest, however, that the Corporation might now guarantee to acquire the land and buildings shown in scored red on the plan to the west of the level crossing. That on the east belongs to Government and will not have to be paid for. No provision has been made in the Railway estimates for the shifting and relaying of water mains, because the fixing of the liability for this is believed to depend on the date when they were laid down. This I am endeavouring to discover. The cost will be comparatively trifling, that is to say, less than Rs. 3,000, but it is a point upon which I will report further.—I have, &c.,

H. A. ACWORTH,
Municipal Commissioner.

ESTIMATE No. 521 OF 1892.

Framed by the Executive Engineer, Municipality, of the probable cost of purchasing ground, compound walls and buildings for the low level roads below the proposed Falkland Road Bridge.

Quantity.	Items.	Rate.	Per	Amount.	Total.
	JIVRAJ BALOO MILLS. *Compound wall.*	Rs. a. p.		Rs. cents.	Rs. cents.
990 c. ft.	General excavation	1 8 0	100 c. ft.	14·85	
990 „	Uncoursed rubble masonry in foundation ...	17 0 0	„	168·30	
743 „	Do. for plinth... ...	18 0 0	„	133·74	
1,162 „	Brick masonry in superstructure	35 0 0	„	406·70	
990 s. ft.	Pointing to rubble masonry in plinth...	2 8 0	100 s. ft.	24·75	
1,980 „	Plastering to brick work ½" thick	7 0 0	„	138·60	
165 r. ft.	Chunam coping over brick wall, including broken glass	12 0 0	100 r. ft.	19·80	
160 „	Masonry drains built complete	3 8 0	„	560·00	
241 sq. yd.	Ground to be taken up ...	10 0 0	sq. yd.	2,410·00	
				3,876·74	
	Add 10 per cent. for contingencies	...	...	387·67	
				4,264·41	
	Add 15 per cent. for compulsory acquisition ...	...	...	639·66	
					4,904·07
	Carried over...	...	...	...	4,904·07

Quantity.	Items.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. cents.	Rs. cents.
	Brought forward...	...	...	...	4,904·07
	PROPERTY MARKED A IN THE RAILWAY ENGINEER'S No. 7476 8-7-92.				
106 sq. yds.	Ground to be taken up ...	10 0 6	sq. yd.	1,060·00	
	Compound wall.				
606 c. ft.	General excavation	1 8 0	100 c. ft.	9·09	
606 „	Rubble masonry in foundation	17 0 0	„	103·02	
758 „	Do. in superstructure ...	18 0 0	„	136·44	
1,010 s. ft.	Plastering ½" thick	2 8 0	100 sq. ft.	25·25	
101 r. ft.	Chunam coping over wall, including broken glass ...	12 0 0	„	12·12	
				1,345·92	
	Add 10 per cent. for contingencies	...	...	134·59	
				1,480·51	
	Add 15 per cent. for compulsory acquisition ...	...	...	222·07	
					1,702·58
	PROPERTY MARKED B.				
24,966 c. ft.	Building...	0 2 0	100 c. ft.	3,900·94	
155 sq. yds.	Ground occupied by it; scored portion=41 sq. yds., and unscored portion=114 sq. yds.	10 0 0	sq. yd.	1,550·00	
				5,450·94	
	Add 10 per cent. for contingencies	...	...	545·09	
				5,996·03	
	Add 15 per cent. for compulsory acquisition ...	...	...	899·40	
				6,895·43	
					6,895·43
					13,502·08
				Say Rs...	13,600·00
		Severance of properties „ ...			3,000·00
				Total Rs...	16,600·00

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer.

The following statement * was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 4th December 1892.

Resolved : "That, as applied for by the Commissioner, in his letter No. 19239, dated this day, sanction be given to the acceptance by him, of the tender of Messrs. Mistri Bhedwar, Vachaghandy & Co., the only tender received, for the construction of manual Fire Engine Station at DeLisle Road, at a cost of Rs. 16,414·17. The charge to be met out of the 4½ lakhs loan for the erection of Fire Brigade Stations in the City."

No. 9502.

It was decided that on account of the holding of His Excellency the Governor's Levee at 4-30 P. M., on Wednesday, the 14th instant, the meeting of the Committee on that day be called for 2 P. M.

BOMBAY, 14*th December* 1892.

AT the meeting of the Standing Committee, held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L. M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKER YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 7th instant were signed.

The seal of the Corporation was affixed to deed of agreement (1) between Mr. Rustomji Kavasji Patel and the Corporation, securing to the Municipality the right to acquire, at any future time, the set-back of property at Nos. 96 and 2, Khetwadi 12th Lane, without payment of any compensation in respect of the unauthorised work, indicated on the plan annexed to the deed and at the rate of Rs. 8 per square yard for any land shown on the plan, scored red, to be there taken up, inclusive of any loss, damage or expense sustained by him by reason of such acquisition; and (2) between Mr. Kandas Fakirchand and the Corporation, in respect of property at No. 28, Kamathipura 1st Street, providing that whenever after the expiration of five years from the date of this indenture he is required to hand over to the Municipality the whole of the set-back land shown on the plan scored red, he shall do so, clear of any superstructure and free of all costs.

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* *See* Appendix B.

The seal was also affixed to deed of contract with Messrs. Stephens & Sons, for the construction of a Fire Brigade brake at a cost of Rs. 1,450.

The seal was also affixed to 200 debentures of the Tansa Water Works Loan, Nos. 19977-78 to 20145-46, and 20471-72 to 20701-2, of Rs. 1,000 each.

No. 9752. *Resolved*: "That, as applied for by the Commissioner, in his memoranda Nos. 19293, 19537 and 19706, dated 8th, 12th and 13th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Name of Owner.		Where.
Mr. B. A. Fernandes ...	...Building	at No. 1953, Gowari Village, Matunga Road.
Memon Abdula Miya Ahmed Khandwani.	Do.	at No. 98, Kamathipura 10th Street.
Mr. Rajanna Luxumon ...	... Do.	at Nos. 26-30, Kamathipura 9th Street."

No. 9753. *Resolved*: "That sanction be given to the cutting off of water connections as per list accompanying the Commissioner's memorandum No. 19747, dated this day."

No. 9754. *Resolved*: "That the following be *recorded* :—Letter No. 18724, dated 30th ultimo, from the Commissioner, reporting that he entrusted to Mr. Oomersi Mowji the work of making a tea and coffee service of silver for Mr. W. Clerke, C.I.E., at a total cost of Rs. 1,055-1-0. The charge, together with cost of remitting the amount by money order, to be met from the grant of Rs. 1,250."

Proposed by R. G. Oxenham, Esq., seconded by Colonel Wilson—

"That, as applied for by the Commissioner, in his letter No. 17628, dated 15th instant, the Corporation be recommended to sanction the outlay of Rs. 6,720 per annum, for the cost of telephonic communication on the Government telegraph lines, between Tansa lake and the various points on the duct line and Bombay.

"That the Corporation be recommended to add the sum of Rs. 6,720 to the budget grant for Water Works for 1893-4 accordingly."

Amendment, proposed by Abdalia M. Dharamsi, Esq.—

No. 9755. "That the consideration of the question of the provision of telephonic communication between Bombay and Tansa, along the line of the water main, be

postponed until the Commissioner has been able to ascertain from the Government Telegraphic Department what the annual rental would be of a telephonic line between the principal syphon stations, Nos. 1, 2, 7, 15 and 19, and Bombay."

The *amendment*, which was seconded, was *carried* as a substantive motion by 7 votes *against* 3.

Resolved: "That the following be *recorded* :—Letter No. 19443, dated 9th instant, from the Commissioner, reporting that as the stock of 4", 5", and 6" Siemen's meters is low, he has accepted the tender of Messrs. John Fleming & Co., for the supply of the following meters at a cost of Rs. 2,361, at the following rates :— No. 9756.

			Rs.
Three	4" Siemen's meters,	Rs. 220 each	660
Two	5" "	" 288 "	576
Three	6" "	" 375 "	1,125
		Rs.	2,361

The charge to be debited in the first instance to the advance for the purchase of stores and fittings, &c., and subsequently adjusted against Water Works material grant when the meters are issued on hire."

Considered letter No. 19353, dated 8th instant, from the Commissioner, to the Secretary, as under :—

SIR,—With reference to the Corporation resolution No. 6229, of 23rd January 1890, sanctioning an expenditure of Rs. 9,294, for a water tank and hoses at the Arthur Crawford Markets to be used in case of fire, I have the honor to state that the Chief Officer, Fire Brigade, is of opinion that with the present system of water distribution in the city it is not necessary to erect the tank in question, but suggests that a 4" connection be taken from the 16" main in Hornby Road and 7 hydrants fitted with screw valves be placed in different places in the market.

He also proposes to purchase six 100 feet lengths of hose with the necessary gear for the hydrants.

At the same time he considers it necessary to provide 30 iron fire buckets for each of the following markets, viz., Fort, Mazagon, Erskine Road and Foras Road.

The total cost of the work amounts to Rs. 6,203 as per the accompanying estimates, and I have to request the Standing Committee and Corporation to sanction the above expenditure which can be met out of Rs. 9,294 referred to above and which has been renewed under the Standing Committee's resolution No. 5492 of 24th August last.—I have, &c.,

H. A. ACWORTH, Commissioner.

Resolved: "That, as applied for by the Commissioner, in his letter No. 19353, dated 8th instant, the Corporation be recommended to sanction the expenditure of Rs. 6,203, to provide for the cost (1) of Rs. 4,900 for post hydrants, fire buckets, &c., for extinguishing fires at Arthur Crawford Markets; and (2) of Rs. 1,303 for fire buckets with brackets for ditto at the Fort, Mazagon, Erskine Road and Foras Road Markets. The charge to be met from the grant of Rs. 9,294 for a water tank and hoses at Arthur Crawford Markets."

No. 9757.

Read letter, as under, dated 10th instant, from the President, Municipal Corporation, on behalf of the House Connection Committee, to the Municipal Secretary :—

SIR,—I have the honour, on behalf of the House Connection Committee, to request the Standing Committee to recommend the Corporation to grant a further sum of Rs. 1,739 to provide for the balance of the printing charges and shorthand-writer's fees in connection with the proceedings of the House Connection Committee. The charges on this account to date amount to Rs. 2,239, namely, Rs. 1,214 for printing and lithographing and Rs. 1,025 for the shorthand-writer's fees. Under the terms of the printing contract all these bills for printing are much overdue, and it is necessary for the Committee to apply to the Standing Committee and the Corporation for a grant of Rs. 1,239, the difference between the grant of Rs. 1,000 already sanctioned and the cost actually incurred and to be incurred.

As the House Connection Committee have yet to prepare and present their report to the Corporation, and may probably require the services of the shorthand-writer, application is now made for a further sum of Rs. 500 for probable future charges, or say, in all Rs. 1,739.—I have, &c.,

JAVERILAL U. YAJNIK,
President, Municipal Corporation, on behalf of H. C. C.

Resolved : "That the Corporation be recommended to sanction a further grant of Rs. 1,739, from surplus cash balance, to provide for the balance of the charges already incurred, and the probable charges to be incurred, for printing work and shorthand-writer's fees in connection with the House Connection Committee's proceedings."

No. 9758.

Considered letter No. 9750, dated 13th instant, as under, from the Secretary, to the Chairman :—

SIR,—I have the honour to request that the Standing Committee may be asked to recommend the Corporation to sanction the expenditure of Rs. 583, from surplus cash balance, to provide for

the cost of printing memorial to the Secretary of State for India, dated 22nd October 1892, on the question of the proposed increase in the force of the Police and its cost. The memorial was prepared by a Committee of the Corporation and with accompaniments extended over 109 pages of printed foolscap, considerable portions of which had to be reprinted.

There is no provision for the charge in the Budget.—I have, &c.,

H. W. BARROW, Municipal Secretary.

No. 9759. *Resolved* : "That the Corporation be recommended to sanction the expenditure of Rs. 583, from surplus cash balance, to provide for the cost of printing memorial to the Secretary of State for India, on the question of the proposed increase in the force of the Police and its cost."

Proposed by Colonel Wilson, seconded by Harkisondas Narotumdas, Esq.—

No. 9760. "That, as a special case and in consideration of the fact that the death of Mr. Cursetji Hormasji Madan, late Inspector, Road Department, was accelerated by illness contracted in the execution of his duty on the Tansa Duct line, the Corporation be recommended to sanction the payment to his widow, Bai Manekbai Cursetji Madan, of a gratuity equal to the amount she would have received if her husband had been entitled to the benefits of the Pension Fund."

Carried.

No. 9761. *Resolved* : "That a Sub-Committee, consisting of Mr. Abdalla M. Dharamsi, Mr. K. M. Shroff, and Mr. Oxenham, be appointed to report in conjunction with the Commissioner as to how the further excess on the Tansa Water Works of rupees one lakh over the amount of the last estimates sanctioned by the Corporation, on the 12th November 1891, is proposed to be met, and also, as to how the amounts which are shown as credits against excess items can be adjusted."

No. 9762. *Resolved* : "That memorandum from the Commissioner, No. 19462, dated 10th instant, forwarding the following return, dated 21st ultimo, of houses or portions of houses which fell during the month of October last, be *recorded* on the minutes of this day's proceedings."

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties. Persons injured.	Casualties. Persons killed.	Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	Remarks.
							1892.					Rs.			
1	C	190	Parel Road..	Dewkaram Gangji...	House ...	...	10th Oct.	Decayed joists ...	Part of 2nd floor.	Nil.	Nil.	240	Nil.	Nil.	Action was taken for other bad portions in July 1891 when this portion was not unsafe.
2	F	6	Lalbag, Parel Road.	Ramji Khatau ..	Chall ...	Between 3 or 4 years.	1st „	Continual exposure to rain and tap water caused the ends of joints in the walls to rot and the sudden weight of a large crowd broke the joists.	Open galleries fell.	6	1	100	„	„	
3	„	...	Do.	Hansraj Raoji ...	Do. ...	Do.	6th „	Ends of the joists getting rotten by exposure to rain and tap water.	A joist of the open privy, chauk of the second floor of the chall.	Nil.	Nil.	10	„	„	
4	G	54	UpperMahim	Abdula bin Alli Sahib Coor.	Shed ...	20 years.	12th „	Saturation of mud used in the walls.	Whole of the east external wall and portions of the north and south external walls.	„	„	50	„	„	
5	„	...	Do.	Manekchand Hirachund.	Do. ...	Do.	„ „	Do. ...	A portion of the west main wall of a ground floor storied.	„	„	10	„	„	
6	„	...	Mahim, P. C. Street.	Bablia Pandu ...	Do. ...	Do.	„ „	Do. ...	The north and south main walls.	„	„	40	„	„	

The following was *withdrawn* by the Secretary as having been erroneously entered by the head clerk on the agenda for this meeting:—

Letter No. 18955, dated 6th instant, from the Commissioner, reporting generally on the question of the petition from dealers and hawkers of country-made shoes and boots.

Considered the following :—

No. 18618 OF 1892-93.

BOMBAY, 28*th November* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—I have the honour to forward for the consideration of the Corporation an application from Mr. W. C. Rowe, late Superintendent of Workshops. Mr. Rowe left the Municipal service on 11th February last under circumstances which, in the ordinary course of things, would certainly have debarred me from supporting an application for pension or gratuity on his behalf. But the fact that he has been permanently disabled for work while discharging his Municipal duties places a different aspect on the case and justifies, I think, his claim to indulgence.

He states that "In the beginning of the present year, while adjusting the pump valves at the Love Grove Pumping Station, one of the valves, on the removal of the wedge inserted to take the height by me, dropped on to my right hand, forcing a number of little brass rags or splinters into it. I at the time removed, as I believed, all the pieces of brass that had so entered my hand and took no serious notice of the accident, as I suffered from nothing more at the time than from a pinch."

After describing his subsequent symptoms and the pain which he suffered, Mr. Rowe goes on to say: "I was urged by my friends to go to the European General Hospital for further advice. There I received every care and attention from Dr. Arnott, who eventually found it necessary to put me under chloroform and to cut open the fleshy part of my right hand and to amputate the first and second knuckle joints. After some three weeks the lower part of the same finger was found to be affected, and I had to subject myself to another operation, also under chloroform, for the removal of the rest of the finger. The day before the last operation a piece of brass came out of the wound while the hand was being dressed at the hospital.

"This explained the cause of my sufferings, which are clearly attributable to the accident already referred to and which befel me in the execution of my duty at the Love Grove Pumping Station."

The medical certificates from Drs. daCunha and Arnott, which I enclose, and the personal enquiries which I have made of the latter confirm Mr. Rowe's statements, and leave no doubt that he has been

permanently disabled in the execution of his Municipal duties. Being a mechanical engineer, this is of course a very serious thing, as he is practically deprived of his means of livelihood. As this misfortune befel him in the course of duty, I consider that he ought in justice to be paid the pension which he had earned at the date of his retirement, and would have been entitled to under the rules if he had left the service under a medical certificate, which he would have been compelled to do a few months later. This pension amounts to Rs. 166-10-1 per mensem, and I recommend that it be paid to him.—I have, &c.,

H. A. ACWORTH, Municipal Commissioner.

E. G. HOSPITAL, *12th October* 1892.

Certified that Mr. W. C. Rowe has been treated as an out-door patient in this Hospital from the 3rd July 1892 for amputation of a finger and inflammation and suppuration of the hand. Mr. Rowe informed me that the hand was injured while working at the Love Grove Pumping Station, and on one occasion a small piece of brass was found in the wound.

JAMES ARNOTT, M.D.,
Brigade-Surgeon-Lieut.-Colonel,
in charge European General Hospital.

I hereby certify that Mr. W. C. Rowe was under my treatment for the inflammation and suppuration of his right hand from the month of May last to the beginning of July following.

J. GERSON DACUNHA,
M.R.C.S., ENG., &C.

BOMBAY, *14th October* 1892.

It was agreed that the consideration of letter No. 18618, dated 28th ultimo, as above, *be postponed* till next meeting, and that the letter be printed and circulated in the meantime.

Referring to Corporation's resolution No. 6243, of the 8th September last, as per margin, the Standing Committee in forwarding herewith letter from the Commissioner, No. 17944, dated 18th ultimo, and the accompaniments thereto, beg to report, as the result of their enquiries, that, so far as can be foreseen, the cost to the Municipality of constructing the northern approach

No. 9763.

No. 6243. "That the following be forwarded to the Commissioner and the Standing Committee for report:—Government Resolution No. 1553, P. W. Department, Railway, dated 6th August 1892, on the subject of the construction of overbridge across the G. I. P. Railway at Frere Road, Wari Bunder, at a total cost of Rs. 7,58,065."

of the proposed new overbridge at Wari Bunder and the short cross road to Lawrence DeLima Street, should not exceed the amount Rs. 1,32,652 entered under the head of 'Loan Works' in the Budget estimates for 1893-4. Having regard to the long-felt and undoubted necessity of the overbridge in question, and to the fact that the Municipal contribution towards its cost will be limited to this sum, the Committee strongly recommend the Corporation to sanction the grant accordingly.

No. 17944 OF 1892-93.

BOMBAY, 18*th November* 1892.

To THE MUNICIPAL SECRETARY.

SIR,—I have the honour now to reply to Standing Committee's Resolution No. 6302 of 14th September last and to report on the subject of the Wari Bandar Overbridge.

2. On 17th November 1887 the Corporation passed the following Resolution No. 1588 :—

"That, with reference to Government Resolution No. 1734 of "1884, Public Works Department, Government be informed "that the Municipality are not prepared at present to enter- "tain the proposal of constructing a new road from Wari "Bandar to Mazagon ; but that the Corporation will agree to "contribute their share of the cost of an overbridge, provided "that share does not exceed Rs. (1,00,000) one lakh."

At this time the Port Trust insisted as a condition of a contribution on their part that the Municipality should not only construct the north approaches to the bridge, but that they should also construct a "wide and direct road * * from the north end "of the bridge as far as the Mazagon property of the Trust ; this "road to be finished by 31st December 1892." On this latter demand negotiations were then wrecked, and the scheme for a bridge at Wari Bandar for the time being dropped. In July 1891 the Chamber of Commerce took it up again in a letter to Government, and Government in a Resolution No. 1931 of 8th September 1891, expressed a hope that the parties to the original arrangement would again consider the question. The parties referred to are the Municipality, the G. I. P. Railway and the Port Trust. In the same Resolution Government gave it as their opinion that a bridge 40' in width would be sufficient,—an opinion from which I ventured to differ. I subsequently made arrangements for a meeting between the Agent and Chief Engineer, G. I. P. Railway, the Chairman and Engineer, Port Trust, and the Executive Engineer, Municipality, and myself at the Railway offices, when I gave it as my opinion that the needs of the public would be met by a width for the

roadway of the bridge of 40′, with provision either for one footpath of 10′ or two of 5′ in width, which might be placed on cantilevers outside the parapet of the bridge if necessary. At the same time I stated it to be a *sine-qua non* from the Municipal point of view that the demand for the construction of the road within any given time as a condition precedent to a contribution from the Port Trust, must be dropped. On 23rd September 1891 the Chamber of Commerce addressed me on the subject, and I have since been in communication with the Port Trust, who have, I am glad to say, now withdrawn the condition objected to. I forward copy of letter to me, No. 1067 of 17th March last, from the Secretary, Port Trust. The "limitations and conditions" referred to are summarized in an appendix which I have attached to the letter and I have numbered them *seriatim*. The first which refers to the road to the north, but no longer assigns any period for its construction, does not now require notice, and with regard to the low level approach roads from the goods yard, these, if public roads, will necessarily be maintained by the Municipality, if not, they will be maintained, I presume, by the Railway. The second condition needs no notice. I do not understand the third. The Municipality will certainly not incur any expense for Tramway extension, and this condition may be disregarded, unless the Corporation choose to repudiate any such vague, hypothetical and needless liability as it seems to try and fix upon them. Conditions 4, 5 and 6 do not concern the Municipality. Condition No. 7 is a matter of course. The road will be a public road, and on being put in proper order according to Municipal requirements, must be maintained by the Municipality. The 8th condition is similarly a matter of course. The 9th condition is the one which the Corporation is now asked to assent to.

3. The Railway plans and estimates have now been prepared, and upon them Government Resolution No. 1553 of 6th August last, which has been forwarded to me for report, was issued. Plans and estimates for the northern approach have been prepared by my orders by the Municipal Engineers. I beg to forward the Railway plan as well as the plan and estimates of the Municipal Engineers. The Railway Engineers did not, as they were desired to do by Government Resolution No. 1931 of 8th September 1891, "freely consult the Engineers of the * * Municipality," or indeed make any reference to them at all, and the consequence is some divergence both in plans and estimates, but not of an important character. The Railway plan provides for a low level approach to the bridge westward along Wari Bandar Road, which I do not consider at all necessary. It is sufficient if a low level road be constructed northward along the north approach to the point of junction with the cross road from Lawrence DeLima Street, and this is provided for in the Municipal plan.

4. The estimate of the Municipal Engineers amounts to Rs. 1,32,652, and I have entered this sum in the Loan Works budget

for 1893-94, which has been submitted to the Standing Committee. The Port Trust share of the cost amounts, I understand, to about two lakhs. I now venture to recommend sanction of the Standing Committee and Corporation to the expenditure of Rs. 1,32,652 for the construction of the north approaches of the Wari Bandar bridge and the short cross road to Lawrence DeLima Street according to the estimates of the Municipal Engineers. I may add that the Municipal plans and estimates have been sent to the Port Trustees for comment and returned with the observation that they have none to make.—I have, &c.,

H. A. ACWORTH, Commissioner.

BOMBAY PORT TRUST.

SECRETARY'S OFFICE,

BOMBAY, 17*th March* 1892.

No. 1067.

To THE MUNICIPAL COMMISSIONER.

SIR,—Your letter No. 20878, dated 11th December last, was considered at a meeting of the Trustees held on the 15th instant, and I am directed to state that the Trustees renew their former offer, subject to all the limitations and conditions hitherto laid down, except that they now make no stipulation as to the date by which the Corporation should undertake to complete a wide and direct through road through Mazagon in extension of the Frere Road from the north end of the overbridge, but that they trust that the Corporation will soon see its way to carry out that work.

2. One of the conditions laid down as above mentioned was, that the width of the roadway between parapets was to be limited to 40 feet, but it has been recently proposed to provide a 5′ footpath on each side of the bridge resting on cantilevers. To this the Trustees do not object so long as it does not necessitate their giving up any additional land for the footpaths of the south approach, and this can be provided for by decreasing the widths of the east and west low level approaches from 50 feet to 45 feet and from 40 feet to 35 feet respectively, which would, it is thought, leave those approaches amply wide. If this arrangement is adopted, the Trustees will be prepared to meet the extra cost of the south approach.

3. I am further to state that the Trustees, so far as at present informed, see no objection to the alternative and temporary arrangement proposed in your letter No. 20878, but that the conclusion of Trustees' Resolution No. 380, dated 22nd July 1887 (copy of which is attached for reference), namely, "that the plans of the north "approach to the bridge with its side approaches should be approved "by the Trustees before any expenditure upon the bridge or its "approaches is incurred, and this for both permanent and temporary "arrangements," as intimated in the Secretary, Port Trust's letter

No. 3239, dated 28th July 1887, will of course apply to this arrangement, so that the Trustees may be sure of having their requirements as already intimated complied with.—I have, &c.,

F. G. DUMAYNE,
Secretary.

BOMBAY PORT TRUST.

SECRETARY'S OFFICE,
BOMBAY, 22*nd July* 1887.

No. 380.

Excerpt from the Proceedings of a Meeting of the Trustees of the Port of Bombay held on the 22nd instant.

13. Submitted letter from the Municipal Commissioner, dated 13th June, proposing that instead of the agreement come to that the Municipality should construct a wide and direct road through Mazagon at the same time as the overbridge at Wari Bandar is constructed, ten years should be allowed the Municipality after the bridge is completed in which to make the wide and direct road referred to.

Submitted letter to the Municipal Commissioner, dated 23rd June.
Submitted reply, dated 24th June.
Submitted Minute by the Chairman, dated 5th July.
The papers having been circulated, were not read.
Read Minutes of Trustees thereon.

Resolution No. 380. On the distinct understanding that all the requirements of the Trustees, as mentioned in Resolution No. 584, dated 23rd November 1886, but modified or more particularly defined by Resolution No. 379 of this date, are complied with, and that the Municipal Corporation distinctly undertake to complete a wide and direct through road through Mazagon in extension of the Frere Road from the north end of the overbridge by 31st December 1892, being three years later than under the present arrangement, the Trustees will agree to this extension of time. In this case it should be agreed by the Municipality that the plans of the north approach to the bridge with its side approaches should be approved by the Trustees before any expenditure upon the bridge or its approaches is incurred, and this for both temporary and permanent arrangements.

Wari Bandar Overbridge Conditions.

1. On condition that the Municipality will undertake to construct a good wide through road through Mazagon from the north end of the overbridge, which the Trustees hope the Municipality will soon see its way to do, the Trustees will undertake on their part to give free of charge the land required for low level approaches to the

Railway goods yard on the east and west sides of the south end of the overbridge, such low level approaches not to exceed a width on the east side of 50 feet, and on the west side of 40 feet, and to be constructed and maintained in good order, without expense to the Trust, and to be available at all times for whatever traffic may require to pass over them, not only to and from the Railway Company's goods yard, but to or from the Port Trust roads, east and west of the proposed overbridge.

2. The Trustees will also undertake to construct and defray the cost of the approach to the overbridge at the south end outside the Railway limits, the width of the bridge roadway being limited to 40 feet.

3. In the event of more land being required for approaches in order to provide space for the extension of the Tramway or for any other purpose, the value of such additional land shall be paid by the Municipality or the Tramway Company.

4 The foot of the south approach not to extend beyond the north side of Nagpore Street which, if the south abutment, to be built within the Railway Company's boundary, is placed close up to the first line of rails, will allow of a gradient of about 1 in 32 being obtained for the south approach to the bridge.

5. The Trustees will allow a five-feet footpath on each side of the bridge resting on cantilevers, so long as it does not necessitate their giving up any additional land for the foothpaths of the south approach, and this can be provided for by decreasing the widths of the east and west low level approaches from 50 to 45 feet and from 40 to 35 feet respectively, which would, it is thought, leave those approaches amply wide, and if this arrangement is adopted the Trustees would be prepared to meet the extra cost of the south approach.

6. Sufficient passages for cart and passenger traffic to be provided under the south approach in convenient positions with an average headway of about 12 feet.

7. The south approach after construction to be maintained by the Municipality without expense to the Trust.

8. The Trustees shall have nothing to do with the roadway on the top of the bridge itself, *i. e.*, within Railway limits, or with that of the north approach. The bridge within the G. I. P. Railway Company's limits shall be carried out by the Company at its own cost.

9. The Municipality shall construct at its own cost the north approach, and in connection therewith shall provide an approach from the direction of Hancock bridge in such a way as not to affect injuriously the Trustees' Santa Cruz property, and shall also provide a passage for carts under the north approach, and in or near to the line of the existing road from the Hancock bridge. The plans of the north approach to the bridge with its side approaches to be approved by the Trustees before any expenditure upon the bridge or its approaches is incurred, whether the arrangements are temporary or permanent.

Quantity.	Description of Work.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. a.	Rs. a.
	Wari Bunder—Frere Road Overbridge.				
	Estimate of cost of Overbridge within the Company's limits. Road 40 feet wide with footpaths 5 feet wide on either side. Total width between parapets 50 feet.				
20,025 c. ft.	Excavation in foundations of piers and abutments	4 0 0	100 c. ft.	3,961 0	
19,805 „	Concrete in foundations of piers and abutments	20 0 0	„	3,961 0	
8,800 „	Cement concrete in screw piles	70 0 0	„	6,160 0	
80,100 „	Coursed rubble masonry in piers and abutments	50 0 0	„	40,050 0	
9,300 „	Block in course in piers and abutments ..	100 0 0	„	9,300 0	
1,050 „	Ashlar in string course and parapet ..	2 0 0	C. ft.	2,100 0	
860 „	Do. under bed girders	2 0 0	„	1,720 0	
53,600 s. ft.	12" metalling, including sandstone, watering and consolidating	12 0 0	100 s. ft.	6,756 0	
2,280 r. ft.	Footpath curbing	0 8 0	R. ft.	1,140 0	
3,420 s. ft.	Gutter 18" wide	40 0 0	100 s. ft.	1,368 0	
1,024 tons.	Labour in erecting plate and box girders..	20 0 0	Ton.	20,480 0	
500 „	Labour in sinking screw piles and bracing them together	50 0 0	„	25,000 0	
434 „	Labour in fixing flooring plates	5 0 0	„	2,170 0	
14,100 s. ft.	Labour in erecting C. I. Railway	5 0 0	100 s. ft.	705 0	
				1,24,871 0	
	Add—10 per cent. contingencies..	....	....	12,487 0	
					1,37,365 0
	STORES.				
826 tons.	Steel plate girders	150 0 0	Ton.	1,23,900 0	
198 „	Steel box girders	150 0 0	„	29,700 0	
469 „	C. I. screw piles	95 0 0	„	44,555 0	
31 „	Angle and T-iron bracing to screw piles ..	200 0 0	„	6,200 0	
434 „	Flooring plates	150 0 0	„	65,100 0	
3,556 cwt.	C. I. Railway	7 0 0	Cwt.	24,892 0	
					2,94,347 0
	Total Rs.	....	....	....	4,31,705 0

Quantity.	Description of Work.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. a.	Rs. a.
	Wari Bunder—Frere Road Overbridge.				
	Estimate of cost of alteration in existing sidings in connection with the Overbridge.				
448 l. yds.	Removing and refixing cross-over roads ..	0 12 0	L. yd.	336 0	
11 sets.	Removing and refixing points and crossings	25 0 0	Set.	275 0	
113 l. yds.	Slewing existing sidings	0 4 0	L. yd.	28 4	
22 No.	New crossing sleepers	10 0 0	Each.	220 0	
				859 4	
	Add—10 per cent. contingencies ..	....	....	85 12	
					945 0
	Total Rs..	....	....	....	945 0

Quantity.	Description of Work.	Rate.	Per	Amount.	Total.
	Wadi Bunder—Frere Road Overbridge.	Rs. a. p.		Rs. a.	Rs. a.
	Estimate of cost of south approach to Overbridge. Road 40 feet wide with footpaths 5 feet wide on either side. Total width between parapets 50 feet.				
235,000 c. ft.	Excavation in foundations	4 0 0	100 c. ft.	9,400 0	
47,000 „	Concrete in foundations	20 0 0	„	9,400 0	
30,534 „	Coursed rubble masonry in piers and abutments	50 0 0	„	15,267 0	
142,677 „	Rubble masonry with coursed face work in retaining walls	25 0 0	„	50,286 15	
8,146 „	Rubble masonry in spandrils..	22 0 0	„	1,792 2	
1,194 „	Coursed rubble masonry in spandril face..	60 0 0	„	716 6	
10,237 „	Block in course arching	125 0 0	„	12,796 4	
1,925 „	Ashlar in springers	2 0 0	c. ft.	3,850 0	
2,608 „	Ashlar in string course	2 0 0	„	5,216 0	
5,477 „	Block in course in parapet	100 0 0	100 c. ft.	5,477 0	
1,565 „	Ashlar coping to parapet	2 0 0	c. ft.	3,130 0	
6,000 s. ft.	Dammering 2 coats spandrils	5 0 0	100 s. ft.	300 0	
177,900 c. ft.	Filling in hard dry materials between retaining walls	3 0 0	100 c. ft.	5,337 0	
31,300 s. ft.	12" metalling, including sandstone, watering and consolidating	12 0 0	100 s. ft.	3,756 0	
1,250 r. ft.	Footpath curbing	0 8 0	R. ft.	625 0	
1,875 s. ft.	Gutter 18" wide..	40 0 0	100 s. ft.	750 0	
....	Drainage	....	..	1,000 0	
				1,29,099 11	
	Add—10 per cent. contingencies..	....	..	12,909 5	
					1,42,009 0
	Add—Cost of supervision 15 per cent..	....	..	....	21,301 0
	Total Rs. ..	....	..	....	1,63,310 0

Quantity.	Description of Work.	Rate.	Per	Amount.	Total.
	Wadi Bunder—Frere Road Overbridge.	Rs. a. p.		Rs. a.	Rs. a.
	Estimate of cost of low-level roads on east and west sides of south approach of Overbridge.				
28,400 s. ft.	Filling 6" dry rubble and levelling ground on east side	5 0 0	100 s. ft.	1,420 0	
28,800 „	Filling 6" dry rubble and levelling ground on west side	5 0 0	„	1,440 0	
22,400 „	9" metalling, including sandstone, watering and consolidating, east side	9 0 0	„	2,016 0	
22,800 „	9" metalling, including sandstone, watering and consolidating, west side	9 0 0	„	2,052 0	
1,960 r. ft.	Footpath curbing	0 8 0	r. ft.	980 0	
2,940 s. ft.	Gutter 18" wide..	40 0 0	100 s. ft.	1,176 0	
....	Drainage	....	..	1,000 0	
				10,084 0	
	Add—10 per cent. contingencies..	....	..	1,008 0	
					11,092 0
	Add—Cost of supervision 15 per cent..	....	..	....	1,663 0
	Total Rs..	....	..	....	12,755 0

Quantity.	Description of Work.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. a.	Rs. a.
	Wadi Bunder—Frere Road Overbridge.				
	Estimate of cost of north approach to Overbridge. Road 50 feet wide with footpaths 5 feet wide on either side. Total width between parapets 60 feet and of north-west approach road 32 feet wide, with footpaths 5 feet wide on either side. Total width between parapets 42 feet.				
213,000 c. ft.	Excavation in foundations	2 0 0	100 c. ft.	4,380 0	
58,400 „	Concrete in foundations	20 0 0	„	11,680 0	
178,014 „	Rubble masonry with coursed face work in retaining walls	35 0 0	„	62,304 14	
3,379 „	Ashlar in string course	2 0 0	c. ft.	6,758 0	
7,096 „	Block in course in parapet	100 0 0	100 c. ft.	7,096 0	
2,027 „	Ashlar copying to parapet	2 0 0	c. ft.	4,054 0	
375,300 „	Filling in hard dry material	3 0 0	100 c. ft.	11,259 0	
41,700 s. ft.	12" metalling, including sandstone, watering and consolidating	12 0 0	100 s. ft.	5,004 0	
1,620 r. ft.	Footpath curbing	0 8 0	r. ft.	810 0	
2,430 s. ft.	Gutter 18" wide	40 0 0	100 s. ft.	972 0	
....	Drainage	....	..	2,000 0	
				1,16,317 14	
	Add—10 per cent. contingencies..	....	..	11,631 2	1,27,949 0
	Add—Cost of supervision 15 per cent...	....	..	....	19,192 0
	Total Rs...	....	..	....	1,47,141 0

Quantity.	Description of Work.	Rate.	Per	Amount.	Total.
	Wadi Bunder—Frere Road Overbridge.	Rs. a. p.		Rs. a.	Rs. a.
	Estimate of cost of low-level road from foot of incline of north approach of Overbridge to Lawrence DeLima Street Road, 35 feet wide, with footpaths 5 feet wide on one side. Total width 40 feet.				
10,400 s. ft.	Filling 6" dry rubble and levelling the ground	5 0 0	100 s. ft.	520 0	
9,700 „	9" metalling, including sandstone, watering and consolidating	9 0 0	„	873 0	
140 r. ft.	Footpath curbing	0 8 0	R. ft.	70 0	
210 s. ft.	Gutter 1'-6" wide	40 0 0	100 s. ft.	84 0	
....	Drainage	....	....	200 0	
				1,747 0	
	Add—10 per cent. contingencies..	....	....	174 0	1,921 0
	Add—Cost of supervision 15 per cent...	....	....	....	288 0
	Total Rs...	....	....	....	2,209 0

ESTIMATE No. A.

Registered numbers of drawings 538, 539, 540, 541, 542 of 17th August 1892.
ESTIMATE NO. 510A OF 1892.

Framed by the Executive Engineer, Municipality, of the probable cost of constructing a proposed bridge at Wari Bunder.

Quantity.	Items.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. cents.	Rs. cents.
59,792 c. ft.	General excavation, including filling in with the excavated materials ...	2 8 0	100 c. ft.	1,494·80	
48,478 „	Soil cutting	2 0 0	„	969·56	
64,319 „	Filling in with Contractor's earth or muram, including haulage to the works, watering, ramming, etc. ...	2 8 0	„	1,607·98	
13,745 „	Hydraulic lime concrete laid complete	20 0 0	„	2,749·00	
41,629 „	Rubble masonry in common mortar in foundations	17 0 0	„	7,076·93	
1,387 „	Rubble masonry in superstructure ...	18 0 0	„	249·66	
31,524 „	Ashlar masonry, rough dressed in front and backed with rubble masonry in common mortar in superstructure, laid complete ...	45 0 0	„	14,185·80	
4,627 „	Ashlar masonry, fair dressed (on both sides in common mortar in superstructure, laid complete)	70 0 0	„	3,238·90	
405 „	Kurla cut stone work, fair dressed and slightly moulded	2 12 0	c. ft.	1,113·75	
691 „	Blue cut stone work, fair dressed in Newel's footstones to lanterns and guard stones, fixed complete ...	2 8 0	„	1,727·50	
3,512 „	Blue cut stone work, slightly moulded, fair dressed in coping string, coarse and bedding stones, fixed complete	2 12 0	„	9,658·00	
23 „	Teakwood work, wrought, framed, and slightly moulded in hand rails fixed complete	2 12 0	„	77·00	
6,699 s. ft.	Blue stone pavement, 4″ thick, medium dressed, including common lime concrete (8″ thick)	40 0 0	100 s. ft.	2,679·60	
15,803 „	Pointing Ashlar masonry with cement and sand (1 to 1)	3 12 0	„	592·61	
27,300 „	Metalling with 6″ of consolidated metal, including 9″ of dry rubble packing, 1″ of sandstone watering, rolling and consolidating complete.	12 8 0	„	3,413·50	
1,113 r. ft.	Blue stone kerbing, 15″ deep and 6″ thick, rounded on the external edge, medium dressed on the joints and exposed faces and set in common mortar	50 0 0	100 r. ft.	556·50	
1,113 „	Table stones, 4″ in depth and 18″ wide, medium dressed, set in common mortar, and joints not to exceed ¼″ in thickness	60 0 0	„	667·80	
84 cwt.	Cast-iron work in brackets and posts, fixed complete	7 0 0	cwt.	588·00	
886 „	Wrought-iron work in girders, buckle plates and parapet walling, fixed complete	12 0 0	„	10,632·00	
17 „	Sheet lead rockers for girders, fixed complete	25 0 0	„	425·00	
16 Nos.	Lanterns with cast-iron posts (as per drawing), fixed complete	30 0 0	each.	480·00	
				64,182·89	
	Add—10 per cent. for contingencies...	.....	.....	6,418·28	70,601·17
	Grand Total Rs. ...	.....	.....	.....	70,602·00

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer, Municipality.

ESTIMATE No. B.

ESTIMATE No. 510B OF 1892.

Framed by the Executive Engineer, Municipality, of the probable cost of purchasing properties and land required for the proposed bridge at Wari Bunder.

Quantity.	Items.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. cents.	Rs. a. p.
3,878 c. ft.	Store shed No. 1	0 2 0	c. ft.	484·75	
1 No.	Well No. 2 near store shed No. 1	...	Lot.	300·00	
406 s. ft.	Compound wall near store shed No. 1	0 8 0	s. ft.	203·00	
790 c. ft.	Jaoli shed No. 3	0 0 6	„	24·69	
5,120 „	Coolie lines No. 4	0 1 0	c. ft.	320·00	
15,624 „	Coolie lines No. 5	0 1 0	„	976·50	
317 „	Jaoli shed No. 5 near coolie lines No. 5	0 0 6	„	9·90	
108 „	Privy No. 56 to coolie lines No. 5	0 2 6	„	16·88	
689 „	Privy No. 6	0 2 6	„	107·66	
2,331 „	Coolie lines No. 7 near out-house No. 8	0 1 0	„	145·69	
3,876 „	Out-house No. 8	0 1 0	„	242·25	
3,978 „	Do. No. 9	0 1 0	„	248·63	
3,099 „	Stable No. 10	0 1 0	„	193·69	
686 „	Privy No. 11 near stable No. 10	0 2 0	„	85·75	
540 s. ft.	Compound wall near out-house No. 8	0 8 0	s. ft.	270·00	
2,052 c. ft.	Carriage shed No. 12 ...	0 1 0	c. ft.	128·25	
36,835 „	Bungalow No. 13	0 3 0	„	6,906·56	
9,116 „	Bungalow No. 14	0 3 0	„	1,709·25	
2,730 „	Gallery attached to bungalow No. 14	0 1 6	„	255·94	
12,708 „	Bungalow No. 15	0 3 0	„	2,382·75	
11,673 „	Outhouse No. 16	0 2 0	„	1,459·12	
18,322 „	Outhouse No. 17	0 3 0	„	3,435·37	
647 „	Shed No. 18 near out-house No. 17	0 1 6	„	60·66	
5,040 „	Outhouse on lane level No. 19	0 2 6	„	787·50	
270 s. ft.	Compound wall by the side of outhouse No. 17 ...	0 9 0	sq. ft.	151·87	
192 „	Walls between bungalows Nos. 14 and 15	0 8 0	„	96·00	
.....	Steps with masonry walls No. 20	...	lot.	50·00	
19,851 c. ft.	Outbuilding No. 21	0 2 6	c. ft.	3,101·72	
448 „	Privy No. 22...	0 2 6	„	70·00	
45,423 „	Bungalow No. 23	0 2 6	„	7,097·44	
15,325 „	Woodstock No. 24	0 1 0	„	957·81	
				32,279·63	
			say,	32,280·00	32,280 0 0
3,840·11 s. yds.	Land to be taken up ...	5 0 0	s. yd.	19,200·55	
			say,	19,201·00	19,201 0 0
	Grand Total Rs. ...	...	...	.....	51,481 0 0

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer, Municipality.

ESTIMATE No. C.

ESTIMATE No. 510C OF 1892.

Framed by the Executive Engineer, Municipality, of the probable cost of purchasing properties and land between boundary required for proposed bridge and Lawrence DeLima Street.

Quantity.	Items.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. cents.	Rs. a. p.
949 c. ft.	Privy No. 25...	0 2 6	c. ft.	148·28	
19,860 „	Stable No. 26	0 2 0	„	2,482·50	
6,261 „	Outhouse No. 27	0 2 0	„	782·62	
87,420 „	Bungalow No. 28	0 3 0	„	16,391·25	
7,098 „	Outhouse No. 29	0 2 0	„	887·25	
294 s. ft.	Compound wall by the side of stable No. 26	0 8 0	s. ft.	147·00	
1,200 „	Compound wall by the side of bungalow No. 28 ...	0 9 0	„	675·00	
2,200 c. ft.	Roofing No. 27a to verandah near outhouse No. 27.	0 1 0	c. ft.	137·50	
65,412 c. ft.	Bungalow No. 30	0 3 0	„	12,264·75	
1 No.	Well No. 31	...	Lot.	300·00	
4,145 c. ft.	Outhouse No. 32	0 2 6	c. ft.	647·65	
720 s. ft.	Compound wall of bungalow No. 30	0 9 0	s. ft.	405·00	
67,014 c. ft.	Bungalow No. 33	0 3 0	c. ft.	12,565·12	
1 No.	Well No. 34	...	Lot.	300·00	
3,525 c. ft.	Shop No. 35	0 2 6	c. ft.	550·78	
				48,684·70	
2,303 s. yds.	Land to be taken up ...	5 0 0	s. yd.	11,515·00	
				60,199·70	
	Grand Total Rs. ...	...	...	..... say,	60,200 0 0

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer, Municipality.

SUPPLEMENT TO ESTIMATE No. 510A OF 1892.

Framed by the Executive Engineer, Municipality, of the probable cost of constructing Wari Bundar Overbridge.

Quantity.	Items.	Rate.	Per	Amount.	Total.
		Rs. a. p.		Rs. a. p.	Rs. a. p.
54,886 c. ft.	General excavation, including filling in with the excavated materials, &c. ...	2 8 0	100 c. ft.	1,372 2 4	
6,861 „	Hydraulic lime concrete laid complete	20 0 0	„	1,372 8 2	
40,370 „	Rubble masonry in common mortar in foundation ...	17 0 0	„	6,862 14 5	
	Add—10 per cent. for contingencies	.....	.....	9,607 3 11 960 11 7	
				10,567 15 6	
	Grand Total Rs. ...	.....	.....	..... say,	10,569 0 0

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer, Municipality.

The following return was read and *recorded* :—

No. 9764. Return of fires at Bhoewada Road (Parel), Haines Road, Ripon Road, Kandawadi Lane, Bellasis Road, Chukla Street, and Abdul Rahman Street, forwarded with the Commissioner's memorandum No. 19177, dated 6th December 1892.*

The following statement † was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 11th December 1892.

No. 9765. *Resolved* : "That the following be *recorded* :—Letter No. 19658, dated 13th instant, from the Commissioner, reporting that he has entrusted to Mr. Gopal Govind the work of reconstructing the pillars for screens in the outlet well at Tansa Dam, at a cost of Rs. 526. The charge to be met from the provision for the dam and outlet works."

No. 9766. *Resolved* : "That the following be *recorded* :—Letter No. 19710, dated this day, from the Commissioner, reporting that he has accepted the tender of Messrs. Mistri, Bhedwar & Co., for the erection of metal vent drainage shafts in Ripon Road at a cost of Rs. 1,944. The charge to be met from the grant of Rs. 3,047, for ventilating shafts, &c., new works, current year's budget."

No. 9767. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 19705, dated 13th instant, sanction be given to the work of the brickwork bedding above 78·50 T.H.D. for the new Worthington engines, pumps and boilers at Love Grove being entrusted to Messrs. Sitaram Luxumon at a cost of Rs. 13,751.

"That under the terms of Section 72 (3) of the Municipal Act, the Standing Committee dispense with the invitation for tenders which would otherwise be necessary, as the Commissioner reports it is very desirable to give this work to the present contractors, and that it could not be done cheaper departmentally; that moreover at present there is no suitable officer in the Engineer's Department who could be spared to look after such work if done departmentally; and that moreover this work must proceed simultaneously with the erection of the engines, as various parts thereof will have to be bedded in the brickwork."

* *See* Appendix C. † *See* Appendix B.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 19767, dated this day, sanction be given, under section 92 (*b*) of the Municipal Act, to the sale, for Rs. 1,500 to Messrs. Richardson & Cruddas, of direct acting Cornish steam pump, 12 × 12, complete with boiler and fittings, now lying unused at Malabar Hill Reservoir."

No. 9768.

The Commissioner stated that the work of erecting the new machinery at Love Grove new Pumping Station being urgent, he proposes to ask sanction to the tender that may be selected, by circular.

BOMBAY, 21*st December* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.

BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; A. G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 14th instant were signed.

The seal of the Corporation was affixed to deed of contract with Messrs. Littlewood & Co., for filling in with muram and providing blue trapstone headers in connection with the work of reconstructing portion of Gibbs Road.

No. 9912.

The seal was affixed (1) to 10 attested duplicate debentures of the Tansa Water Works Loan, Nos. 9565-66, 17445-46, 17465-66, 17467-68, 17469-70, of Rs. 1,000 each; Nos. 17519, 17839, 17843, 17874, 17887 of Rs. 500 each: (2) to 6 consolidated debentures of ditto Nos. 17521-25, of Rs. 2,500; Nos. 17556-58, of Rs. 1,500; Nos. 17841-42, of Rs. 1,000; Nos. 17852-58, of Rs. 3,500; Nos. 17859-60, of Rs. 1,000; Nos. 17881-83, of Rs. 1,500: and (3) to 100 debentures of the loan of 4½ lakhs for the Fire Brigade quarters and stations, namely, 10, Nos. 1 to 200 of Rs. 10,000 each; 10, Nos. 201 to 300, of Rs. 5,000 each; 30, Nos. 301 to 420, of Rs. 2,000 each; 30, Nos. 421 to 480, of Rs. 1,000 each; and 20, Nos. 481 to 500, of Rs. 500 each.

Resolved: "That, as applied for by the Commissioner, in his memoranda Nos. 19820 and 20094, dated 15th and 19th instant, sanction be given, under

No. 9913.

section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.	Where.
Mr. Valliji Kurimji	Building at Kamathipura 13th Street.
Messrs. Abdul Ali and Hasan Ali Mohamed Ali or Mr. Adamji Jewanji Bohra.	Building at No. 117, Baba Dhabu Street."

Resolved : " That sanction be given to the cutting off of water connections as per list accompanying the Commissioner's memorandum No. 20291, dated this day."

No. 9914.

No. 9915. Considered again application from Mr. W. C. Rowe, late Superintendent of Workshops, for a pension.

Proposed by R. G. Oxenham, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

" That the Corporation be recommended to grant a compassionate allowance to Mr. W. C. Rowe, equivalent to the amount of the money paid by him to the Pension Fund, say, about Rs. 2,500."

On a division, the motion was *lost* by 5 votes *against* 4.

Considered the following :—

No. 20138 OF 1892-93.

BOMBAY, 19*th December* 1892.

TO THE MUNICIPAL SECRETARY.

SIR,—Numerous petitions have been from time to time received by the Corporation and, I believe, the Standing Committee concerning the insanitary condition of the district lying east of Ripon Road and north of the Byculla Club, and the Corporation being aware that a complete system of roads has been sanctioned for that locality, some not unnatural impatience has been expressed in debate as to the delay that has occurred in constructing them. I have constantly answered by referring to the difficulty of acquiring the large area of land at stake, and the necessity, in the interests of the Municipality, of doing so on reasonable terms. I have now the pleasure to announce that I have agreed with Bai Motlibai, by far the largest land-owner in the locality in question, for the purchase of all the land in her possession required for roads and frontages at Rs. 3 a square yard. The area required from Bai Motlibai is 225,300 square yards, and the price at Rs. 3 a yard comes to Rs. 6,75,900. Land amounting to 80,770 square yards is still required from Mr. M. F. Kama.

2. The balance to the credit of the 15 lakhs loan when the Budget for 1891-92 was framed was Rs. 10,40,039, the whole of which was entered for expenditure in that year. Of this sum, Rs. 8,48,304-14-8 were renewed as a lapsed grant in the current year, and the balance to-day is Rs. 5,03,171-1-7. The payments to Bai Motlibai and Mr. Kama will considerably more than absorb this

balance, and nothing will be left to meet the result of negotiations now proceeding for land required in Agripada between Ripon and Haines Roads, and which will absorb about Rs. 3,00,000 for the construction of roads in both the areas referred to, or for the construction of the Tansa Road, the survey of which is now complete and tenders for its construction have been invited. The latter road will cost about Rs. 1,35,442 ; the former roads will cost about Rs. 2,00,000.

3. I annex a schedule, which cannot be made absolutely complete, of payments made up to date and liabilities still to be incurred in Agripada and on the Tansa and Connaught Roads. It will be observed that up to date there has been no opportunity for commencing the sale of frontages, though with the construction of the Tansa and Connaught Roads and those in Agripada, which the impending completion of negotiations has now brought within measurable distance, that opportunity is now near at hand.

4. I have the honor to ask the Standing Committee to recommend the Corporation to sanction the advance of 7½ lakhs, from surplus cash balance and other available balances of loan funds to the credit of the 15 lakhs loan, to be repaid as frontages are sold off. This will enable us to dispose of claims in Agripada and hasten the completion of a road system which has been so long demanded.—I have, &c., H. A. ACWORTH, Commissioner.

No. 9916. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 20138, dated 19th instant, and with a view to enable him to dispose of claims for land acquired for the construction of roads in Agripada District and to complete the roads already sanctioned, the Corporation be recommended to authorise the advance of 7½ lakhs, *from* surplus cash balance and other available balances of loan funds, *to* the credit of the 15 lakhs loan for new roads. Such advances to be repaid from the sale proceeds of surplus land when sold for frontages."

No. 9917. *Resolved*: " That, as applied for by the Commissioner, in his letter No. 19951, dated 16th instant, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 300 tons Davison's West Hartley coal at Rs. 19-12-0 per ton, delivered at Love Grove.

" That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as similar arrangements sanctioned by the Committee's resolutions Nos. 9755, dated 7th January 1891, and 921, 1453, and 4271 of 1882-93, have been advantageous to the Municipality."

No. 9918. The Secretary was directed to record the fact that since their last meeting the Committee have accorded sanction (by circular) to the acceptance, by the

Commissioner, of the tender of Mr. Charles Briggs for the erection of new pumping machinery at Love Grove at a cost of Rs. 22,210, including Rs. 5,130, for expenses and wages of foreman sent out by the maker.

Resolved : " That the following be *recorded* :—Letter No. 20071, dated 17th instant, from the Commissioner, reporting that he has accepted the tender of Mr. Rastamji Nasarwanji Vachaghandi, for filling in part of Naigam Tank with murum earth, at Rs. 2-6-0 per brass, and for pitching work at Rs. 9 per brass. The charge of Rs. 2,057, to be met from the provision of Rs. 2,194, for the work in the 4½ lahks loan for the Fire Brigade quarters and stations." No. 9919.

It was agreed that the following letter, No. 19981, dated 16th instant, from the Commissioner, be printed on the minutes of this day's proceedings and brought on for consideration at the next meeting :—

SIR,—Provision has been made in the loan works budget for the current year, statement No. 13, page 76, for the following works, but as it is not advisable to raise loan this year, they have been included in the loan works budget for the ensuing year :—

Health Department stables in F and G Wards, exclusive of the cost of land which is already acquired...	...Rs.	78,744
Health Department bigaries' chawl at Bori Bunder	... „	66,000
Total	...Rs.	1,44,744

No loan will be raised next year until after the rains, but there is no reason why, in the meanwhile, the works above referred to, the want of which has been so keenly felt and frequently urged upon my attention by the Health Officer, should not be proceeded with now, and the cost thereof paid for by advances from available balances, to be adjusted hereafter against the loan when raised.

For these reasons I have the honour to forward plans and estimates of the cost of constructing the stables and a chawl, and to request the Standing Committee to recommend the Corporation to sanction payments on account thereof, pending the raising of the loan, out of the funds above referred to.

The Corporation sanctioned Rs. 22,700, in the year 1888-89, for the construction of a chawl for the bigaries of the Arthur Crawford Markets, but owing to the difficulty of acquiring a site, this work has not yet been taken in hand.

It has now been arranged to build a chawl of three two-storied blocks as shown on the plans, which will accommodate both the Health Department and Markets bigaries. Provision for the Market chawl was made in the loan of 35 lakhs which was raised in the year 1890-91. The cost of this combined arrangement is Rs. 70,658, out of which Rs. 52,575 will be debited to the Health Department and Rs. 18,083 to the Markets.—I have, &c.,

H. A. ACWORTH, Commissioner.

ESTIMATE NO. 517 OF 1892.

Framed by the Executive Engineer, of the probable cost of constructing new Bigaries' Chawls at the Paltan Road Stables containing in all 100 *rooms back to back and* 30 *seated water closets with a flushing chamber.*

Quantity.	Items.	Rate.	Per.	Amount.	Total.
		Rs.cents		Rs. cents.	Rs. cents.
66,874 c. ft.	General excavation, including filling in for the plinth	1·50	100 c. ft.	1,003·11	
5,363 „	Murum filling on the ground floor, including watering, ramming and cowdunging, &c.	3·50	„	187·76	
1,040 „	Common lime concrete laid complete.	16·00	„	166·40	
5,851 „	Hydraulic lime concrete laid complete	20·00	„	1,170·20	
30,554 „	Uncoursed rubble masonry in common mortar in foundations ...	17·00	„	5,194·18	
2,758 „	Uncoursed rubble masonry in common mortar in plinth	17·50	„	482·65	
4,912 „	Dry rubble packing hand set ...	5·00	„	245·60	
28,436 „	Brick-work in common mortar in walls, superstructure	35·00	„	9,952·60	
568·2 „	Blue cut stone work, medium dressed in bases of the posts, steps and plinth coping, including pointing with cement and sand 1 to 1 fixed complete	2·00	„	1,136·40	
6,030·3 „	Teakwood, wrought rebated, bedded or chamfered in posts, beams, joists, post-plates, props, rails, rail-bars and roof, including painting ...	2·75	„	16,583·32	
36·1 „	Teakwood work slightly moulded in hand rails fixed complete and painted	3·00	„	108·30	
16,425 s. ft.	Pointing brick-work with cement and sand 1 to 1	3·75	100 s. ft.	615·94	
3,164 „	Pointing rubble masonry with cement and sand 1 to 1	3·75	„	118·65	
64,356 „	Common plastering, including two coats of lime whitewash	6·50	„	4,183·14	
6,300 „	Koba flooring 4″ thick laid complete in the rooms on the 1st floor, including common plastering ...	14·00	„	882·00	
1,040 „	Do. do. to all the nahanies, including cement plastering	16·00	„	166·40	
20,743 „	Mangalore tiling laid complete, including battens and painting ...	13·00	„	2,696·59	
282 „	Blue stone ladees, 4″ thick below posts	30·00	„	84·60	
6 „	Blue stone dhappas, 4″ thick ...	48·00	„	2·88	
458 „	2″ Boarding of teakwood for string boards, fixed complete and painted	48·00	„	217·44	
681 „	1″ Boarding of do. for trads, including nosing, fixed complete and painted	25·00	„	170·25	
6,396 „	1″ Boarding of benteak wood for flooring to rooms on the 1st floor, fixed complete and painted ...	20·00	„	1,279·20	
5,580 „	1″ Boarding of teakwood flooring for verandahs and nally gutters, fixed complete and painted	25·00	„	1,395·00	
534 „	¾″ Boarding of teakwood for risers, fixed complete and painted ...	20·00	„	106·80	
1,004 „	Dammering two carts, including new dongri cloth	4·00	„	40·16	
3,603 „	1¼″ Framed and diagonal battened teakwood doors, hung folding W. I. fixtures and fastenings ...	1·00	„	3,603·00	
1,364 „	1″ Framed and diagonal battened teakwood doors, hung folding and painted, including W. I. fixtures and fastenings	1·00	„	1,364·00	
	Carried over ...	...	...	53,156·57	

Quantity.	Items.	Rate.	Per.	Amount.	Total.
		Rs.cents		Rs. cents	Rs. cents.
	Brought forward ...			53,156·57	
1,575 s. ft.	⅛" Teakwood fixed venetians with splayed edges for roof ventilators, fixed complete and painted ...	0875	s. ft.	1,378·13	
820 r. ft.	Mangalore tile ridges and hips set in common mortar, painted and coloured complete	25·00	100 r. ft.	205·00	
90 „	6" Stoneware pipe laid complete ...	0·75	r. ft.	67·50	
240 „	4" C. I. rainwater-pipe, including bends, elbows, &c., fixed complete.	1·00	„	240·00	
480 „	¾" W. I. Galvanized pipe	0·375	„	180·00	
360 „	1¼" Lead pipe	0·75	„	270·00	
420 „	2½" C. I. ventilating pipe	0·43	„	180·60	
14 „	½" W. I. galvanized pipe	0·40	„	5·60	
54 cwts.	W. I. flushing tank	18·00	Cwt.	972·00	
30 No.	6"×6" Stoneware gully traps ...	3·50	Each	105·00	
30 „	6"×4" Stoneware junctions ...	2·00	„	60·00	
30 „	Waste pavement cistern	20·00	„	600·00	
30 „	¾" Stop valve	3·00	„	90·00	
30 „	¾" Ball valve	3·00	„	90·00	
30 „	1½" Nozzle to soil pan...	1·00	„	30·00	
30 „	C. I. privy pans	15·00	„	450·00	
1 „	1½" Brass ferrule	5·00	„	5·00	
60 „	C. I. Brackets	5·00	„	300·00	
1 „	4" C.I. annular syphon fixed complete	12·00	„	12·00	
1 „	½" Stop valve	1·25	„	1·25	
Lot.	Diverting the existing water service pipes	20·00	Lot	20·00	
„	Drainage connections (taken as a lot).	1580·00	„	1,580·00	
				59,998·65	
	Add—10 per cent. for contingencies...	...	...	5,999·86	
				65,998·51	
	Total Rupees ...	...	...		66,000

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer.

SUPPLEMENTARY ESTIMATE *Framed by the Executive Engineer, of the probable cost of additional works in the Bigaries' Chawl at Paltan Road.*

Quantity.	Items.	Rate.	Per	Amount.	Total.
	Abstract.	Rs. cts.		Rs. cents.	Rs. a. p.
11,183 s. ft.	Koba flooring to ground floor rooms and galleries on the 1st floor ...	14·00	100 s. ft.	1,565·62	
4,027 „	Indian patent stone paving to ground floor verandahs	34·00	„	1,369·18	
Lot 1	Washing place...	1,000·00	Lot.	1,000·00	
156 c. ft.	Teakwood frames for windows ...	2·75	c. ft.	429·00	
35 cwt.	Wrought iron bars	10·00	cwt.	350·00	
				4,713·80	
	Deduct.				
5,363 c. ft.	Murum filling on the ground floor as already provided in the original estimate	3·50	100 c. ft.	187·76	
600 „	Brick masonry wall	35·00	„	210·00	
800 s. ft.	Pointing brick work	3·75	100 s. ft.	30·00	
800 „	Plastering brick work	6·50	„	52·00	
				479·76	
				4,234·04	
	Add—10 per cent. contingencies ...	...	...	423·40	4,658 0 0
	Add—Estimated amount already sanctioned	...	...	.....	66,000 0 0
	Total Rs. ...	...	...	... ..	70,658 0 0

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer,

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 20018, dated 17th instant, and with reference to the Committee's resolution No. 8933, dated the 23rd November 1892, sanction be given to the payment of the modified, or half the usual sub-division fees which the Secretary and the Treasurer of the Bank of Bombay has been good enough to consent to accept, in respect of 100 debentures to be issued as per statement submitted therewith, instead of 500 debentures for Rs. 500 each, on account of the first instalment of 2½ lakhs of the loan of 4½ lakhs for Fire Brigade quarters and stations."

No 9921.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 19776, dated 14th instant, sanction be given, under section 517 (*j*) of the Municipal Act, to the filing of a suit in the Court of Small Causes, against Mr. Babu Ramchandra, one of the managers of properties, D ward, Nos. 3028 (1), 3028 (2) and 3028 (3), Banganga Row, Walkeshvar, for the recovery of property taxes and notice fees, amounting to Rs. 43-8-1, due in respect of the said properties as per list submitted therewith."

No. 9922.

Resolved : "That the following be laid on the table :— Letter dated 15th instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of Receipts and Disbursements at the end of each week for the month of November last, and compared them with the general and subsidiary ledgers and journals, and found them correct. Forwarding the usual summary and statement of their scrutiny of the accounts."

No. 9923.

Resolved : "That memorandum No. 20095, dated 19th instant, from the Commissioner, forwarding the following return of houses or portions of houses which fell during the month of November 1892, be *recorded* on the minutes of this day's proceedings."

No. 9924.

Statement of Houses or portions of Houses which fell during the month of November 1892.

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known.)	Date of fall.	Cause of fall.	Part fallen.	Casualties.		Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	REMARKS.
										Persons injured.	Persons killed.				
							1892					Rs.			
1	C	219-223	Duncan Road	Sheik Malay Mungawar	Mosque ...	.....	1st Nov....	Rafters decayed .	West portion ...	Nil.	Nil.	240	Nil.		
2	„	214	Fanaswadi...	Ramji Ganu and Vithu Raghu Vishram	Shed ...	.....	19th Dec. .	Do.	Top portion ...	„	„	100	„	„	

No. B 9952 of 1892-93.

16th December 1892.

Forwarded to the Municipal Commissioner.

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer.

No. 20095 *of* 19*th December* 1892.

Submitted to the Standing Committee for information.

H. A. ACWORTH, Commissioner.

No. 9925. *Resolved* : "That the Health Officer's Report for the third quarter of 1892 be passed on to the Corporation."

No. 9926. *Resolved* : "That the following be referred to the Commissioner for disposal :—Letter from Mr. C. B. d'Abreo, dated 15th instant, thanking the Commissioner for taking steps to have the market re-built at Purbhadevi Road, but stating that no reply has yet been given to applicant in respect of his complaint as to the sale of stale mutton thereat. That the applicant be informed accordingly."

No. 9927. *Resolved* : "That the Standing Committee beg to report that the matters complained of by Mr. Jekisandas Maniram in his letter, dated 16th instant, refer to a building application and the assessment of his property. Applicant should apply to the Commissioner."

The following return was read and *recorded* :—

No. 9928. Return of fires at Nepean Sea Road, Arthur Road (Chinchpoogly) and Tava Lane (Abdul Rahimon Street), forwarded with the Commissioner's memorandum No. 19579, dated 12th December 1892.*

The following statement† was laid on the table:—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 18th December 1892.

No. 9929. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 20262, dated this day, and subject to the approval of the Corporation, under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 1,200, *from* savings in section

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* *See* Appendix C. † *See* Appendix B.

IV, lighting, Markets and Slaughter Houses (cost of lighting other markets), Health Department Budget, *to* section V, meat carriage, repairs to meat-vans, same budget, to meet the excess in the latter section caused by constant repairs to meat-vans."

Resolved : "That, as recommended by the Municipal Secretary, sanction be given to one month's extension of privilege leave to Mr. L. W. Michael, Corporation and Standing Committee's Office, from 24th instant.

No. 9930.

"That sanction be given to the transfer of Rs. 50 *from* savings in section III, fees payable to members of the Committee, *to* section II, establishment, same budget, to meet salary of a temporary clerk on Rs. 50 per mensem, from 24th instant."

Resolved : "That, as applied for by the Commissioner, in his letter No. 20306, dated this day, the Corporation be recommended to sanction the payment of Rs. 6,000, from surplus cash balance, to meet excess in section 4, contingencies and stores, B, maintenance of Love Grove pumping station, Engineer's Budget, for the current year."

No. 9931.

BOMBAY, 28*th December* 1892.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M. ; THE HO'NBLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; KAIKHOSRO N. KABRAJI, Esq. ; K. M. SHROFF, Esq. ; R. G. OXENHAM, Esq., M.A. ; ACCACIO G. VIEGAS, Esq., L. M. & S.
H. A. ACWORTH, Esq., I.C.S., Commissioner ; and the ASSISTANT HEALTH OFFICER.

The signing of the minutes of the meeting held on the 21st instant, was postponed.

The seal of the Corporation was affixed to deed of agreement with Mr. Mubarak Hoosein, regarding ground at Mahaluxmi Dhobiwada, leased to him for a term of 2 years from the 16th instant, for washing clothes by steam, at a monthly rent of Rs. 7.

No. 10043.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 20667, dated this day, sanction be given, under section 352 (2) of the Municipal Act, to the removal of the following structure built without permission :—

No. 10044.

Name of Owner.	Where.
Sheik Jumboo Sheik Jamon ...	Building at Falkland Road."

Resolved : "The sanction be given to the cutting off
No. 10045. of water connections as per list accompanying the Commissioner's memorandum No. 20600, dated 24th instant."

Resolved : "That the following be *recorded* :—Letter
No. 10046. No. 20408, dated 22nd instant, from the Commissioner, reporting that he has sold the right by public auction of cutting grass for one year from 1st January to 31st December 1893, at the following places :—

"(1) From the Municipal land near the condensing reservoir at the Pumping Station (the area of which is 820 square yards), and from the compound of Mr. Varjivandas Madhavdas's bungalow at Warli (the area of which is 33,333 square yards), to Mr. Ardeshir Kharshedji for Rs. 47.*

"(2) From the sides of the open Main Drain between Arthur and Clerk Roads (the area of which is 22,777 square yards) and on the banks of the storm-water reservoir at Mahalakshmi (the area of which is 36,166 square yards), to Ramdu Malu for Rs. 900."†

Resolved : "That the following be *recorded* :—Letter
No. 10047. No. 20298, dated 21st instant, reporting that he has entered into a lease for one year for Rs. 100, for about 300 square yards of Municipal ground at the junction of Dadar Road and the Tulsi pipe line with Mr. Hormusjee Nasservanji Raja, for the sale of vegetables, fruit, &c., thereat, on the following conditions :—

"1. That Mr. Hormusji Nasservanji Raja shall pay all Municipal rates and taxes for the ground occupied by him.

"2. That he gives up immediate possession at any time when the ground is required by the Municipality in which case he will be given a proportionable refund of rent for the unexpired portion of the period.

"3. That he shall store no heavy or immoveable materials and shall claim no damages in the event of the water main leaking or bursting."

Resolved : "That, as applied for by the Commissioner,
No. 10048. in his letter No. 20598, dated 24th instant, sanction be given to the acceptance by him, of the tender of Garlick's Indian Patent Stone Com-

* Last year the right was sold for Rs. 150.
† Last year the sale realised Rs. 1,100.

pany, the lowest of 5 tenders received, for the supply of 2,000 casks of cement for the year 1893-94, at the rate of Rs. 7-7-9 per cask."

Read the following :—

2, LEXHAM GARDENS,
KENSINGTON,
LONDON, *November 25th*, 1892.

To H. A. ACWORTH, Esq., C.S.,
Municipal Commissioner for the City of Bombay.

SIR,—I have the honor to acknowledge the receipt of your letter of the 1st instant, and, in reply, to state that it is my wish to be permitted to retire from the service of the Bombay Municipality from the 4th December next, and from that date to be paid the pension due to me, under the rules of that service.

In support of this application I enclose a medical certificate from Sir Guyer Hunter, M.D., late Surgeon-General at Bombay.—I have, &c.,

RIENZI G. WALTON,
Executive Engineer (on leave), Bombay Municipality.

21, NORFOLK CRESCENT, HYDE PARK, W.
24th November 1892.

I hereby certify that Rienzi Walton, Executive Engineer to the Municipality of Bombay, is unfit for further service in India and that such incapacity is not due to his own misconduct. Mr. Walton acting on the advice I gave him did not return to India some months ago.

W. GUYER HUNTER, M.D.

No. 19632 of 1892-93.
BOMBAY, *13th December* 1892.

Very early.

Forwarded to the Chief Accountant for report as to the pension Mr. Walton is entitled to, and that he would be entitled to if the new rules were in force.

H. A. ACWORTH, Commissioner.

No. 3245 of 1892-93.
BOMBAY, *21st December* 1892.

To THE MUNICIPAL COMMISSIONER.

Memo.

Mr. Walton's service in the Municipality up to the 5th instant aggregated 24 years 9 months and 7 days, including 18 months' sick leave and one year and nine months' furlough which he enjoyed during the above period of his service.

2. The former under the old and the latter under the new rules would count as service.

3. Deducting the furlough which does not count under the present rules, Mr. Walton would be entitled, with the sanction of the Standing Committee, to the maximum $\frac{5}{12}$ths monthly pension of Rs. 250 [Rule VI (*b*)].

4. If the new rules had been in force, he would have been entitled to the maximum $\frac{5}{12}$ths of the monthly pension of Rs. 333-5-4 not counting the sick leave.

5. Rule XII of the existing rules provides : " If the officer on leave is unable to rejoin his appointment and applies for pension, his pension should commence from the date of the medical certificate declaring him incapacitated for further service."

The new rules include a similar provision. The certificate produced by Mr. Walton, dated 24th November 1892, declares him unfit for further service in India. His pension, therefore, will have to commence from that date. As, however, a remittance for his leave allowance for the last quarter ending the 5th instant has already been forwarded to Messrs. Coutts & Co., for payment to him, the difference between the furlough allowance paid and the amount of pension due from 24th November to 3rd December 1892 will have to be recovered from his pension.

6. Mr. Walton's service for the periods noted in the margin cannot be verified as the records for that period are not available. If the Acting Executive Engineer can certify from the information available that Mr. Walton was actually in the service of the Municipality during that period, there would be no objection to the sanction of the Standing Committee being obtained to the payment of the above pension from 24th November 1892.

1st to 30th April 1876.
10th to 31st May 1876.
1st to 31st May 1877.
1st to 30th Sept. 1877.

SORABJI NAVAROJI COOPER,
Chief Accountant.

No. 3631 G OF 1892-93.

BOMBAY, 22*nd December* 1892.

It is hereby certified that from office records signed by Mr. Rienzi Walton it appears that Mr. Walton was in the service of the Municipality during the following periods, regarding which a question has been raised by the Chief Accountant :—

1st to 30th April 1876.
10th to 31st May 1876.
1st to 31st May 1877.
1st to 30th Sept. 1877.

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer, Municipality.

No. 20501 OF 23-12-92.

Forwarded to the Standing Committee.

H. A. ACWORTH, Commissioner.

BOMBAY, 23*rd December* 1892.

Under Rule VII. of the Pension Rules, section C, Municipal By-laws, the Commissioner hereby certifies that the character and conduct of Mr. Rienzi Walton, M.I.C.E., late Executive Engineer, have not been such as to render him undeserving of the pension asked for.

H. A. ACWORTH, Commissioner.

No. 10049. *Resolved* : "That a pension of Rs. (250) two hundred and fifty per mensem, from 24th November 1892, be granted, under Rule VI, clause (*b*), of the Pension Fund Rules, Section C of Chapter I, of the Municipal By-Laws, to Mr. Rienzi G. Walton, M.I.C.E., late Executive Engineer, he being medically declared unfit for further service in India.

"That copy of this resolution be forwarded to the Corporation, with reference to their resolution No. 8753, dated 17th November 1892."

No 10050. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 20599, dated 24th instant, and subject to the approval of the Corporation, under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 13,000, from savings in D, Road repairs and maintenance, section 2, cart hire and labour, including road-scraping, Streets and Buildings, Engineer's Budget, to D, Road repairs and maintenance, section 1, purchase of metal, &c., same head, to meet the excess in the latter section."

The consideration of letter No. 19981, dated 16th instant, from the Commissioner, asking sanction to the payment of advances on account of the construction (1) of stables and (2) of new chawl at Pultan Road, was postponed.

Read the following :—

BOMBAY, 17*th December* 1892.

To H. A. ACWORTH, Esq.,
Municipal Commissioner.

SIR,—In acknowledging the receipt of your letter No. 19887, dated the 15th instant, we have the honor to state that we consider there is no use whatever in disputing and that we cannot appeal against the refusal of the District Judge of Thana to retain and hold the compensation awarded in respect of the Pawai Land.

Although, as stated in our letter of the 22nd ultimo, it seems to have been customary in such cases to pay the money through the Court, it is, we think, evident that where this is objected to, it cannot be insisted on.

The Land Acquisition Act does not provide for or recognize any payment by the Collector except to the persons interested. In fact, section 40 expressly directs that "Payment of the compensation "shall be made by the Collector according to the award to the "persons named therein, or, in the case of an appeal, under section "39 (that is to say, an appeal from the decision as to the apportionment) according to the decision on such appeal."

All that the Court has done is to decide that, in the face of the objection taken to the payment into Court, it cannot retain the money. The Court has not made any direction in regard to interest, but section 42 of the Act provides that the amount awarded and the percentage for compulsory acquisition shall be paid by the Collector with interest at 6 per cent. per annum "from the time of so taking possession," subject to the proviso that, "where the decision of the Court under "Part III or Part IV. (the apportionment provisions) of this "Act is liable to appeal, the Collector *shall not* pay the amount of "the compensation or the percentage or any part thereof until "the time for appealing against such decision has expired and no "appeal shall have been presented against such decision, or until "any such appeal shall have been disposed of."

The question of the apportionment between the claimants and counter-claimants has now to be determined under section 39 by the Judge sitting alone (*i.e.*, without Assessors), and any of the parties will have a right of appeal against his decision; there can, therefore, be no doubt but that the time for payment which the Act prescribes will not arrive until the appeal (if there be any) has been disposed of, or, if no appeal is presented until the time for appealing has expired. And the only question is, whether the interest runs until that time arrives. The Advocate-General of Bengal, we find, has expressed the opinion that, where proceedings are pending under the apportionment provisions, interest is payable up to the date of decision, and we cannot feel any doubt but that that opinion is correct.

It certainly is extremely unsatisfactory that the Municipality should be obliged to retain the money and pay interest thereon during the pendency of proceedings in which they are not interested, and over which they have no control, and which consequently may (so far as their power to prevent it is concerned) be protracted almost indefinitely.

We fear, however, that, as the Act stands, there is no escape from this position.—We have, &c.,

CRAWFORD, BURDER & Co.

No. 20156 OF 1892-93.

BOMBAY, 20*th December* 1892.

Forwarded to the Standing Committee for perusal.

H. A. ACWORTH, Commissioner.

No. 10051. *Resolved* : "That the circumstances be reported to Government by the Commissioner, with a request that, as the Land Acquisition Act is understood to be now under amendment, such provision may be inserted in the amending bill as may obviate the recurrence under the new law of so inequitable and unsatisfactory a consequence to a party acquiring land."

No. 10052. *Resolved* : "That the following be *recorded* :—Memorandum No. 20401, dated 22nd instant, from the Commissioner, forwarding letter No. 26468, dated 21st idem, from the Health Officer, enclosing the following results of examination of the Tulsi, Vehar and Tansa Waters for the current month."

Sample of unfiltered Tulsi water obtained from the Distributing Tank, Malabar Hill Reservoir, on the 2nd December 1892.

	Parts per million.
Free Ammonia	·06
Albumenoid Ammonia	·12

Sample of filtered Tulsi water obtained from the Inlet Well, Malabar Hill Reservoir, on the 2nd December 1892.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·08

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Hill Reservoir, on the 2nd December 1892.

	Parts per million.
Free Ammonia	·01
Albumenoid Ammonia	·06

Sample of Tansa water taken from the 27" main in Arthur Road on the 2nd December 1892.

	Parts per million.
Free Ammonia	·01
Albumenoid Ammonia	·06

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 25th December 1892.

* *See* Appendix B.

BOMBAY, *4th January* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, ESQ., C.C.M.C., *Chairman*.
BHALCHANDRA KRISHNA BHATWADEKAR, ESQ., L.M. ; THE HON'BLE MR. FAZULBHOY VISRAM ; GRATTAN GEARY, ESQ. ; HURKISONDAS NURROTUMDAS, ESQ. ; K. M. SHROFF, ESQ. ; R. G. OXENHAM, ESQ., M.A. ; ACCACIO G. VIEGAS, ESQ., L. M. & S. ; COLONEL W. H. WILSON.
H. A. ACWORTH, ESQ., I.C.S., Commissioner ; and the SECRETARY.

The signing of minutes of the meeting held on the 28th ultimo, was postponed.

No. 10077. *Resolved* : " That sanction be given to the cutting off of water connections as per list accompanying the Commissioner's memorandum No. 20961, dated this day."

Considered again letter No. 19981, dated 16th December 1892, from the Commissioner, forwarding plans and estimates, amounting to Rs. 78,644 and Rs. 66,000, and asking the Committee to recommend the Corporation to sanction the payment of advances, from available balances, to be adjusted hereafter against the Loan when raised, to meet the cost of the construction (1) of stables in F and G Wards, and (2) of chawl at Bori Bunder for biggaries, Health Department.

No. 10078. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 19981, dated 16th ultimo, the Corporation be recommended to sanction the payment of advances from available balances of Rs. 78,744 on account of constructing stables in F and G Wards for the Health Department, and Rs. 70,658 for cost of building new chawl at Pultan Road with 100 rooms and latrines for biggaries of the Health Department and of the Arthur Crawford Markets.

" The advances to be repaid (1) from the Loans for these works when raised, as sanctioned by the Corporation at page 76 of the Budget for 1892-93, and (2) from the grant of Rs. 22,700 sanctioned in the Budget for 1888-89 for chawl for the market biggaries. (Lapsed grant renewed 24th August 1892.)"

No. 10079. *Resolved* : " That the consideration of the following be postponed until the Commissioner lays before the Committee the result of the tenders invited for the supply of sandstone :—Memorandum No. 20670, dated 28th December 1892, from the Commissioner, reporting on letter, dated 29th November 1892, from Dr. D. A. D'Monte, containing proposal as regards the quarry hole nuisance at Dadar, Mahim, Parel and Worli."

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 1st January 1893.

The following return was read and *recorded* :—

No. 10080. Return of fires at Parel Road (Chinchpoogli), Mahalarao, Wadi (Kalbadevi Road), Bhendi Bazar, and Girgaum Back Road, forwarded with the Commissioner's memorandum No. 20839, dated 3rd January 1893.†

No. 10081. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 20840, dated 3rd instant, and subject to the approval of the Corporation, under section 133 (2) of the Municipal Act III of 1888, sanction be given to the transfer of Rs. 1,000, from savings in B, public lighting branch, section 2, gas lighting, A, Street and Bunders, Streets and Buildings, Engineer's Budget, to A, Inspection and supervision, section 2, printing, same head and same budget, to meet excess in the latter section, consequent on the printing of new forms for the Streets and Buildings Department."

No. 10082. *Resolved* : " That, with reference to the memorial, dated 2nd instant, from Ganpat Dhaku, late Fire Brigade Lascar, the Standing Committee beg to report that the case is one entirely within the discretion of the Commissioner and that there are no exceptional circumstances in the matter."

No. 10083. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 20929, dated this day, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 300 tons Davison's West Hartley coal in the first week of February 1893, at Rs. 19-12-0 per ton, delivered at Love Grove. That in the event of the contractor being required to supply Powells D. Cardiff coal, the same to be paid for at the rate of Rs. 20 per ton.

" That sanction be also given to the purchase, from the above firm, of a further supply of 1,000 tons Davison's West Hartley coal, at the rate of Rs. 19-4-0 per ton, to be delivered at Love Grove at the end of February next.

" That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders, which would otherwise be necessary, as similar arrangements sanctioned by the Committee's resolution No. 9917 of 1892-93, and previous resolutions have been advantageous to the Municipality. "

* *See* Appendix **B**. † *See* Appendix **C**.

BOMBAY, 11*th January* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; THE HON'BLE MR. FAZULBHOY VISRAM; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; R. G. OXENHAM, Esq., M.A.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meetings held on the 21st and 28th ultimo and 4th instant, were signed.

No. 10494. The seal of the Corporation was affixed to deed of contract (1) with Messrs. Gungaram Luxumon & Co., for the construction of manual fire engine station at Pedder Market; (2) with Messrs. Killick, Nixon & Co. for the supply of 300 tons Colliery screened Davison's West Hartley coal; (3) with Messrs. Mistri, Bhedwar, Vachagandhi & Co., for the construction of manual fire engine station at DeLisle Road; and (4) with ditto for the construction of masonry bridge over the old main drain at Arthur Road.

The seal was also affixed (1) to two attested duplicate debentures of the Bombay Municipal Loan of 1878, Nos. 2535 and 2536, of Rs. 5,000 each; (2) to one attested duplicate debenture of the 35 lakhs Various Sanitary Works Loan, Nos. 551-55, of Rs. 2,500; (3) to three attested duplicate debentures of the Tansa Water Works Loan, Nos. 652, 3847 and 17876, of Rs. 500 each; (4) to one attested duplicate consolidated debenture of ditto, Nos. 3341-50, of Rs. 5,000; and (5) to four consolidated debentures of ditto, Nos. 654-55 of Rs. 1,000, Nos. 4907-16 of Rs. 5,000, Nos. 5271-80 of Rs. 5,000, Nos. 5062-4 of Rs. 1,500.

No. 10495. *Resolved* : "That sanction be given to the cutting off of water-connections as per list accompanying the Commissioner's memorandum No. 21788, dated this day."

Considered letter, No. 21456, dated 7th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honor to forward the results of the call for tenders for the supply of hay, green grass, and grain to the Health Department, during 1893-94. The lowest tender, both for grain and for grass and hay, to the Markets Department and Slaughter

Houses (which is always kept distinct from the general hay tender) is that of Khimjee Vullubhdas, the present contractor, which works out for grain to Rs. 11-3-2½ per mensem against the present year's rate of Rs. 12-0-2, and for hay amounts to a sum total of Rs. 24,070-10-2 against Rs. 24,451-3-1 for the present year. I recommend his tender for sanction as far as grain is concerned.

2. There are four tenders for hay and grass to the Health Department.

The three lowest are :—

Sorabjee N. Moosa, Rs. 1,18,931-5-10, which gives a rate of Rs. 9-3-2 per mensem ; Ratanjee Bapubhai, Rs. 1,19,266-15-11, a rate of Rs. 9-3-6 per mensem ; and Bhojabhai Allarakhia, Rs. 1,19,906-5-8, a rate of Rs. 9-4-4 per mensem.

The Health Officer reports that the samples sent in by Bhojabhai Allarakhia is the best, and also that he is the only one of the three who is a regular dealer in hay. He has been our contractor for two years, and has discharged his contract satisfactorily. Notwithstanding the fact that he incurred very heavy losses in 1891-92, his tender is only Rs. 975 higher than that of the lowest of the three above mentioned, and having regard to all the circumstances I recommend his tender for sanction, as he has consented to lower it by Rs. 2,406-8-2, or from Rs. 9-4-4 to Rs. 9-1-4 a month. It is always best to work with regular dealers and with old contractors who have given satisfaction.

3. I also recommend that the contract for grass at Bandora (*i.e.*, to the Markets Department) be given to the same man. He is willing to reduce it to the level of the lowest tender, and it is preferable to have the whole hay contract in one hand.—I have, &c.,

H. A. ACWORTH, Commissioner.

Proposed by A. G. Viegas, Esq., seconded by the Hon'ble Mr. Fazulbhoy Visram—

No. 10496. "That the consideration of letter No. 21456, dated 7th instant, from the Commissioner, asking sanction to the acceptance of tenders for the supply during 1893-94, of grain, hay, &c., be postponed till next week."

Carried, by 4 votes *against* 3 votes.

No. 10497. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 21358, dated 6th instant, sanction be given to the acceptance by him, of the tender of Messrs. Rustomji Pestonji Master & Co., the lower of the two tenders received, for the supply of iron castings during the year 1893-94, at schedule rates."

No. 10498. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 21344, dated 6th instant, sanction be given to the acceptance by him, of

the tender of Messrs. Vishnu Narsingrao & Co., the lowest of the four tenders received, for the supply of road metal during the year 1893-94 at Rs. 6 per 100 cubic feet."

Resolved : " That the following be *recorded* :—Letter No. 21343, dated 6th instant, from the Commissioner, reporting, under Rule XVI, section C, Chapter I, of the Municipal By-laws, that he has appointed Messrs. W. H. Harris and W. P. McGuire as Sub-Inspectors in the Health Department, on salaries of Rs. 50 per mensem each, whose ages are over 35 years. Stating that the special reasons for appointing Messrs. Harris and McGuire are that they are suitable for the Health Department work, and that they will not be allowed to contribute to the pension fund." No. 10499.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 21298, dated 6th instant, sanction be given to the transfer of Rs. 357, from savings in the grant for the construction of a Mangalore tiled roof over the Infectious Diseases hospital at Arthur Road, New Works, to Section IV, Repairs, Conservany Branch, Health Department budget, to meet the cost of painting the iron work of the hospital which was not provided for in the Budget for 1892-93." No. 10500.

Resolved : " That, as applied for by the Commissioner, in his letter No. 21393, dated 7th instant, sanction be given to the payment to Messrs. Fakirji Pestonji & Co., of Rs. 350-2-6, being extra charges for urgent and night work done in connection with the work of the erection of timber bridge or trestle in connection with the diversion of the 24" Tulsi main through the Parsi Punchayet ground at Gibbs Road subsidence. The charge to be met out of the grant for contingencies, Water Works. No. 10501.

Considered letter No. 21604, dated 9th instant, from the Commissioner, to the Secretary, as under :—

SIR,—Considering the very serious consequences which might occur on the railway from a pipe bursting at Ghatkopar bridge and with a view to minimise accidents as far as possible, the Executive Engineer thinks it necessary to raise the sides of the bridge by erecting parapet girders on the top flange of the two main girders of the bridge, as shown on the accompanying tracing, at a cost of Rs. 1,320, and I propose to entrust this work to Messrs. Richardson & Cruddas, who were contractors for the Ghatkopar bridge.

In the revised estimate submitted to the Corporation under my No. 17466 of 11th November 1892, and which is referred to the Standing Committee for enquiry and report, there is a provision of Rs. 3,48,000 for works from Ghatkopar to Bombay. This work has been completed at a cost of Rs. 3,43,765, leaving a saving of Rs. 4,234-4-11. Under the circumstances I have the honor to request the sanction of the Standing Committee and Corporation to the cost of the work, *viz.*, Rs. 1,320, being met out of the savings mentioned above.—I have, &c., H. A. ACWORTH, Commissioner.

No. 10502. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 21604, dated 9th instant, and subject to the sanction of the Corporation, sanction be given to the expenditure of Rs. 1,320 for cost of erecting parapet girders on the top flange of the two main girders of the Ghatkopar bridge. The cost to be met out of the savings of Rs. 4,234-4-11, from the provision of Rs. 3,48,000, for the Tansa Duct works from Ghatkopar to Bombay.

"That, subject to the above sanction, the Committee approve of this work being entrusted to Messrs. Richardson & Cruddas, who were contractors for the construction of the bridge."

No. 10503. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 21181, dated 5th instant, the Corporation be recommended to sanction the payment to Messrs. Hirjee & Rowjee, late contractors for the Pawai Dam, of Rs. 147-14-3, being the value of fourteen 4″ cast-iron pipes and 42″ smith bellows taken over by the Water Works Department. The charge to be met by debit to profit and loss account (on stock adjustment)."

No. 10504. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 21455, dated 9th instant, the Corporation be recommended to sanction the writing off of Rs. 513-6-0, being the amount of irrecoverable bills for plants, &c., supplied by the Victoria Gardens, on credit to the persons mentioned in the list submitted therewith."

No. 10505. *Resolved* : "That the following be *recorded* :—Memorandum No. 21535, dated 9th instant, from the Commissioner, forwarding letter No. 27785,

dated 7th idem, from the Health Officer, enclosing the following results of examination of the Tulsi, Vehar and Tansa waters for the current month :—

Sample of unfiltered Tulsi water obtained from the Inlet Well, Malabar Hill Reservoir, on the 3rd January 1893.

	Parts per million.
Free Ammonia	·05
Albumenoid Ammonia	·14

Sample of unfiltered Vehar water obtained from the Settling Basin of the Bhandarwada Reservoir on the 3rd January 1893.

	Parts per million.
Free Ammonia	·005
Albumenoid Ammonia	·06

Sample of Tansa water taken from the Hydrant on 27" main in Arthur Road on the 5th January 1893.

	Parts per million.
Free Ammonia	None
Albumenoid Ammonia	·04

The following return was read and *recorded* :—

No. 10506. Return of fires at Nishanpada Cross Lane, Nagdevi Road, Bhoiwada (Parel), Burkhan Kamadin Street (Bellasis Road), Lower Colaba, and Kamathipura 10th Lane, forwarded with the Commissioner's memorandum No. 21547, dated 9th January 1893.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 8th January 1893.

No. 10507. *Resolved* : "That the following be forwarded to the Commissioner, in continuation of the Committee's resolution No. 8065, dated 2nd November 1892, and that the applicant be informed accordingly :—Letter No. 2, dated 9th instant, from Mr. Pandurang Vishnu Abhyanker, protesting against the notice and summons served on him to repair the drain of his premises at Sleater Road."

No. 10508. *Resolved* : "That, as recommended by the Municipal Secretary, sanction be given to one month's extension of privilege leave to Mr. Narayen R. Damle, Clerk, Corporation and Standing Committee's Office, from 9th instant.

"That sanction be given to the transfer of Rs. 25 from savings in Section III, fees payable to members of the

* *See* Appendix C. † *See* Appendix B.

Committee, to Section II, establishment, same budget, to meet salary of a temporary clerk on Rs. 25 per mensem from 9th instant, during Mr. Narayen Damle's absence."

No. 10509. *Resolved* : "That, as recommended by the Municipal Secretary, the allowance for two temporary clerks on Rs. 50 and Rs. 25 per mensem, employed during the privilege leave allowed to Mr. L. W. Michael and Mr. Narayen R. Damle, sanctioned by the Standing Committee in their resolution Nos. 9493 and 9930, dated 7th and 21st ultimo, and No. 10508 of this day, respectively, be apportioned as follows :—

"Mr. Vinayek Bhasker on Rs. 45 to receive Rs. 50 ; Mr. Purshuram Balkrishna, temporary clerk, Rs. 45, and Mr. Dadaji Ramchandra Rs 25."

No. 10510. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 21782, dated this day, sanction be given to the acceptance by him, of the tender of Mr. Sorabjee Jamsetjee, the lower of the two tenders received, for the construction of latrines and urinals in Kennedy Sea Face Garden, at Charni Road, at a cost of Rs. 4,229. The charge to be met out of the grant for the work."

No. 10511. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 21767, dated this day, sanction be given to the transfer of Rs. 395-13-5 from savings in section I, establishment A, miscellaneous, Drainage, Drainage Branch, Engineer's Budget, to section II, Coal, B, Maintenance of Love Grove Pumping Station, same head and same budget, to meet excess in the latter section caused by the occasional working of the centrifugal pumps in order to keep down the level of the sewage."

BOMBAY, 18*th January* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M.; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 11th instant, were signed.

The seal of the Corporation was affixed to deed of contract with Messrs. Hiraji N. Spencer & Co., for the construction of Fire Brigade station in the Fort.

No. 10807.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 22148, dated 13th instant, sanction be given, under section 351 (2), of the Municipal Act, to the removal of the following structure built without permission :—

No. 10808.

Name of Owner.	Where.
Mr. Kharsetji Jamsetji ...	... Building at Mahim Bazaar Road."

Resolved : "That sanction be given to the cutting off of water connections as per list accompanying the Commissioner's memorandum No. 22571, dated this day."

No. 10809.

Considered again letter No. 21456, dated 7th instant, from the Commissioner, asking sanction to the acceptance of tenders for the supply of grain, hay, &c., during 1893-94.

Proposed by Colonel Wilson, seconded by Hurkisondas Narrotumdas, Esq.—

"That, as recommended by the Commissioner, in his letter No. 21456, dated 7th instant, sanction be given to the tender of Mr. Bhojabhoy Allarakhia at the following rates, and provided that he reduces his rates for ooreed, from Rs. 37-13-0 to Rs. 37-9-0, bran, from Rs. 27 to Rs. 26-4-0, matra, from Rs. 27-8-0 to Rs. 27-4-0, and salt, from Rs. 43 to Rs. 42-4-0 per 1,000 lbs :—

No. 10810.

Hay, Rs. 9-13 per 1,000 lbs. ; Green grass, Rs. 5 do. ; Rice straw, Rs. 6-13 do. ; Ooreed, Rs. 37-9 do. ; Gram, Rs. 38 do. ; Bran, Rs. 26-4 do. ; Oil-cake, Rs. 46 do. ; Salt, Rs. 42-4 do. ; Barley, Rs. 36 do. ; Matra, Rs. 27-4 do. ; Rice, Rs. 41 do.

BANDORA SLAUGHTER HOUSES.

	Rs.	a.	p.
Hay	8	12	0
Rice straw	6	13	0
Green grass	3	12	0"

Carried.

Resolved : "That, as applied for by the Commissioner, in his letter No. 22156, dated 13th instant, sanction be given to the payment of Rs. 98-3-6, for cost of making openings in the Carnac Bandar storm water drain which discharges into the harbour. The charge

No. 10811.

to be met out of savings in Section II, inspecting manholes and sewers and cleaning miscellaneous drains, Engineer's Budget."

Considered letter No. 21851, dated 11th instant, from the Commissioner, to the Secretary, as under :—

SIR,—With reference to Corporation resolutions Nos. 13315 of 25th February last and 187, dated 6th April 1892, which, I presume, were rendered technically inoperative from the date (24th November) of Mr. Walton's resignation, I have the honor formally to request sanction to the acting arrangements consequent on those resolutions continuing on their former basis, until the date on which Mr. Murzban takes charge.—I have, &c., H. A. ACWORTH, Commissioner.

No. 10812. *Resolved* : "That, with reference to the Corporation's resolutions Nos. 13315 and 187, dated 25th February and 6th April 1892, respectively, and as applied for by the Commissioner, in his letter No. 21851, dated 11th instant, the Corporation be recommended to continue the acting arrangements as under, from the date (24th November 1892) of Mr. Walton's retirement until the date on which Mr. Muncherjee C. Murzban, C.I.E., takes charge of the office of Executive Engineer :—

"Mr. James W. Smith, to act as Executive Engineer, on Rs. 333-5-4 monthly allowance ; Mr. C. C. James, ditto, as Deputy Executive Engineer, on Rs. 333-5-4 ditto ; Mr. Pundlik Ganesh, ditto, Assistant Engineer, on Rs. 100 ditto ; Mr. Jamsedji D. Nadirshaw, ditto, Superintendent of Streets and Buildings, on Rs. 70 ditto ; Mr. Maneklal Nurbheram, ditto, Chief Surveyor, on Rs. 40 ditto ; Mr. F. C. West, ditto, Road Inspector, on Rs 50-13-4 ditto.

"The total amount of the above arrangements, Rs. 927-8-0, to be met out of the provision of Rs. 1,500, for the salary of the appointment of Executive Engineer."

No. 10813. *Resolved* : "That the following be *recorded* :—Letter No. 22326, dated 16th instant, from the Commissioner, reporting, under Rule XVI, section C, chapter I, of the Municipal By-laws, that he has appointed Mr. Ellapa Karadi as Cemetery Clerk, on a salary of Rs. 30 per mensem, whose age is over 35 years. Stating that the special reasons for appointing Mr. Ellapa Karadi are, that he is a retired Government medical servant and seems fit for the post, and that he will not be allowed to contribute to the Pension Fund."

Resolved : "That the following be referred to the Commissioner for favor of remarks :—Memorandum from the Municipal Secretary, forwarding petition to the Corporation, from Mr. Bechurdas Morlidhur, dated 16th instant, regarding the drainage of his chawl at No. 390, Falkland Road."

No. 10814.

Resolved : "That the following be forwarded to the Commissioner in continuation of the Committee's resolution No. 7748, dated 26th October 1892:—Further letter No. 155, dated 13th instant, from Mr. Sittaram Luxumon, regarding the damage done by him as Drainage Contractor to a building at Haines Road, Agripada House-connections district."

No. 10815.

Resolved : "That, with reference to the letter to the Corporation, dated 16th instant, from Mr. Keeka Atmaram Tamboli, regarding the levy of license fee in respect of betel-nut, leaves and chunam, kept by him for sale at Sheik Memon Street, the Standing Committee beg to report that the application appears to be one for disposal by the Commissioner."

No. 10816.

The following return was read and *recorded* :—

Return of fires at Abdul Rahiman Street, Memanwada Street, Wadi Bandar and Gamdevi Road, forwarded with the Commissioner's memorandum No. 22328, dated 16th January 1893.*

No. 10817.

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 15th January 1893.

Resolved : "That, as applied for by the Commissioner, in his letter No. 22523, dated 17th instant, sanction be given to the purchase, from Messrs. Killick, Nixon & Co., of 200 tons Bengal coal, at the rate of Rs. 16-4-0 per ton, delivered at Love Grove, between the 29th instant and 7th proximo.

No. 10818.

"That, under the terms of section 72 (3) of the Municipal Act III. of 1888, the Committee dispense with the invitation for tenders which would otherwise be necessary, as it is desirable to make experiment of the quality and merits of Indian coal."

* See Appendix C. † *See* Appendix B.

Resolved: "That the following be *recorded* :—Letter No. 22543, dated 17th instant, from the Commissioner, reporting that he has rented to Mr. Aboo Bakar, the out-house standing on the ground lately purchased by the Municipality, from Mr. Trikumdas Vasanji for roads in the Agripada District, for a period of one year at a monthly rental of Rs. 5-8-0, the house to be removeable at a month's notice." No. 10819.

It was agreed that letter No. 22545, dated 17th instant, from the Commissioner, asking sanction to the modification of the License fees in respect of hay, straw and grass, fireworks, horns and hoofs, and stables for horses, levied under section 394 of the Municipal Act, be printed and circulated and brought on for consideration at the next meeting.

BOMBAY, 25*th January* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M.; GRATTAN GEARY, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 18th instant, were signed.

A letter was received by the Secretary, dated 22nd instant, from the Hon'ble Mr. Fazalbhoy Visram, explaining that the absence of that gentleman from meetings is on account of his being in attendance in Calcutta as an extra member of the Legislative Council of His Excellency the Viceroy and Governor General.

Resolved : "That the following be *recorded* :—Letter No. 22874, dated 21st instant, from the Commissioner, reporting that he has accepted the offer of Messrs. Byramji Jehangir & Co., the lowest of 3 offers received, for the supply of 100 tree-guards at Rs. 11-8-0 each. The cost Rs. 1,150 to be met out of the budget grant of Rs. 3,500, for road-side trees, fencing and maintenance, Engineer's Budget." No. 11073.

Resolved : "That the following be *recorded* :—Letter No. 22875, dated 21st instant, from the Commissioner, reporting that he has sold to Mr. No. 11074.

Nur Mahomed Megjee the right of cutting grass, removing mangoes, &c., for the current year, from Municipal Water Works grounds in Salsette, for a lump sum of Rs. 2,000,* as under :—

Lot 1.—Taking grass from Municipal grass land around the margin of Pawai Lake and about the Vehar Road and Pawai engine house. Area, about 100 acres.

Lot 2.—Taking grass from the margin of Vehar Lake ; from the Islands in the Lake ; and from the banks of catchwater channels. Area, over 100 acres.

Lot 3.—Taking grass from the margin of Tulsi Lake and in the Tulsi Jungle. Area, about 1,600 acres, including forest lands.

Lot 4.—Taking grass from the Tulsi pipe line, Tulsi to Andheri-Marol Road. Width of ground, 50 feet. Length, about 6 miles. Area, 36·36 acres.

Lot 5.—Taking grass from the Tulsi pipe line, Andheri-Marol Road to Bandora. Width of ground, 50 feet. Length, about 4½ miles. Area, 26·24 acres.

Lot 6.—Taking grass from the Vehar pipe line, Vehar to Kurla. Width of ground, about 25 feet. Length, 5½ miles. Area, about 17 acres.

Lot 7.—Removing mangoes from Municipal trees at Pawai ; about 2,500 trees. Period of contract, 1st January 1893 to 31st December 1893.

Lot 8.—Removing leaves from date trees on Municipal land at Pawai ; about 2,500 trees. Period of contract, 1st January 1893 to 31st December 1893.

Lot 9.—Removing leaves and fruits from tad palms on Municipal lands at Pawai, Vehar and Tulsi ; about 1,450 trees. Period of contract, 1st January 1893 to 31st December 1893.

Lot 10.—Removing fruits from all Municipal tamarind, custard-apple, guava, jambhul, bor and cocoanut trees at Pawai ; about 260 trees. Period of contract, 1st January 1893 to 31st December 1893.

Lot 11.—For cutting all dead trees of every kind and all living trees and brushwood at Pawai, except trees of the following kinds :—Mango, tamarind, custard-apple, guava, jambhul, bor, cocoa, tad and date palms. The Contractor will be held responsible for any damage done by him or his men to the reserved trees. Period of contract, 1st January 1893 to 31st December 1893.

Lot 12.—Cultivating singodas in the Goper Dam and 2 tanks on the margin of Pawai Lake. Period of contract, 1st January 1893 to 31st December 1893.

* Last year the sale realized Rs. 1,350.

Lot 13.—Fishing in Pawai Lake.

Lot 14.—Cultivating rice on land near Pawai engine house. Area, about 4 acres. Bids will be taken per acre, and final payment will be on the area actually cultivated.

The following item was *withdrawn*, it being one for disposal by the Corporation :—Letter No. 22545, dated 17th instant, from the Commissioner, asking sanction to the modification of the license fees in respect of hay, straw and grass, fireworks, horns, and hoofs and stables for horses, levied under section 394 of the Municipal Act.

No. 11075.

Resolved : "That the following be *recorded* :—Memorandum No. 22572, dated 18th instant, from the Commissioner, reporting, with reference to the Committee's resolution No. 5620, dated 9th January 1889, the transfer of Rs. 2,45,000—(1) of Rs. 1,22,500, from the surplus cash deposit account, to the Municipal loans sinking fund deposit account, on the 9th instant, and (2) of Rs. 1,22,500, from the Municipal loans sinking fund deposit account, to the surplus cash deposit account, on the 10th idem."*

No. 11076.

The following letter and accompaniment thereto were *recorded* :—Letter No. 3436, dated 13th January 1893, from the Chief Accountant, to the Commissioner :—

No. 11077.

SIR,—I have the honor to forward for transmission to the Standing Committee a quarterly return for the quarter ending 30th December 1892, as compared with the corresponding quarter for the previous year, as required by the then Town Council's resolution No. 465 of 1st June 1887, with a list of additional grants sanctioned by the Corporation during the quarter.

2. The unappropriated surplus cash balance as pointed out in the Annual Report, dated 22nd August 1892, of this office for the

---

* The Chief Accountant reports that the balances remaining to the credit of the respective deposit accounts after effecting the above transfers stand as under :—

Surplus Cash Deposit Account—

In 5 per cent. Municipal Debentures for	Rs. 22,43,500	= Rs.	22,43,500 0 0
In 4 per cent. Government Paper for	„ 4,33,000	= „	4,31,700 5 0
In cash		„	1,37,402 11 0
		Rs.	28,12,603 0 0

Municipal Loans Sinking Fund Deposit Account—

In 5 per cent. Municipal Debentures for	Rs. 6,07,500	= Rs.	6,07,500 0 0
In cash		„	79 15 0
		Rs.	6,07,579 15 0

past year amounts to Rs. 5,00,000, excluding 5½ lakhs for lapsed grants for 1891-92 to be renewed and 2½ lakhs for Victoria Garden improvement.

3. Surplus revenue of Rs. 1,90,000 and savings in expenditure amounting to Rs. 1,23,000, for the current year were anticipated while submitting to the Corporation on 7th December 1892, the Standing Committee's Budget Estimates for 1893-94, reserving therefrom Rs. 1,30,339 for additional grants sanctioned, and to be sanctioned, during 1892-93.

4. As per the revised estimates circulated to the members of the Corporation a further surplus of one lakh has accrued (½ a lakh on account of surplus revenue and ½ a lakh of savings in expenditure).—I have, &c., SORABJI NAVAROJI COOPER, Chief Accountant.

List of additional Grants sanctioned by the Corporation for the Quarter ending 31st December 1892.

No.	Month and Date.		Amount.
	1892.		Rs. a. p.
12752	February 11th ...	Grant of Rs. 25 per mensem, from surplus cash balance, as house rent to Mr. Ginger, the head keeper, Victoria Gardens, the premises occupied by him having been reported to be in a dangerous and uninhabitable condition...	75 0 0
7850	October 13th ...	Grant of Rs. 4,562, from surplus cash balance, to meet the cost of constructing a latrine on the site leased from Government in the Charni Road Garden	4,562 0 0
8410	November 10th...	Grant of Rs. 3,016-15-10, from surplus cash balance, to meet the cost of converting 200 single pole scavengering carts into movable dust-bin carts	3,016 15 10
8412	„ 10th ...	Grant of Rs. 46,200, from surplus cash balance, to meet the cost of reconstructing that portion of Gibbs road which subsided during the last rains	46,200 0 0
8420	„ „ ...	Grant of Rs. 16,792, from surplus cash balance, to meet the cost of 1,064 tons of coal in excess of the Budget provision for the current year for the pumping engines at Love Grove ...	16,792 0 0
9454	December 5th ...	Grant of Rs. 540, from surplus cash balance, to meet excess in the grant for printing (including Administration Report and advertisements, Sec. III, Municipal Commissioner's Personal Office Establishment) consequent on the printing of Municipal Servants' List and Building By-laws	540 0 0
9456	„ 5th ...	Grant of £262-10-0, from surplus cash balance, being the amount of Mr. Mansergh's fee for advising the Municipality on the question of the relative merits of steel and iron water mains.	4,262 2 6
9678	„ 8th ...	Grant of Rs. 5,600-2-7, from surplus cash balance, to meet the cost of 311·12 square yards or thereabout of vacant land at Pinjrapol Street, the property of Messrs. Abdool Hoosein Adambhai, Mohamed Ali Lukmanji, Tyeb Ali Lukmanji, Abdul Hoosein Lukmanji, Nanabhai Keekabhai and Abdool Sheik Mahomed, at the rate of Rs. 15 per square yard plus 15 % for compulsory acquisition and 5 % for contingencies, the land being acquired as site for public latrine	5,600 2 7
		Total Rs....	81,048 4 11

ACCOUNT OF THE BOMBAY MUNICIPALITY
as contrasted with that for the Quarter

	Budget Estimate.	Quarter ending 24th December 1891.	Quarter ending 30th December 1892.
RECEIPTS.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Opening Balance	16,00,000 0 0	43,020 12 8	59,598 10 0
General Tax	18,48,758 0 0	5,62,258 9 9	7,64,747 10 6
Water Works Revenue (including Water Tax) ...	12,61,300 0 0	2,23,766 0 6	3,44,744 2 6
Wheel Tax and Tolls ...	3,16,312 0 0	43,523 15 2	41,364 15 11
Halalkhor Tax	5,53,000 0 0	1,41,192 7 7	1,93,626 5 4
Duties, Town...	9,00,000 0 0	2,92,545 2 7	3,36,585 5 2
Licenses	70,750 0 0	12,855 12 0	14,893 8 0
Receipts from Govt. for Liquor Licenses	1,43,750 0 0	.....	.....
„ for Tobacco Duty.	1,80,000 0 0	42,720 0 0	40,693 0 0
Market Receipts	3,33,500 0 0	89,728 8 1	86,973 3 2
Miscellaneous Fees	46,500 0 0	9,221 4 2	15,024 8 11
„ Fines and Penalties...	7,000 0 0	3,802 8 0	3,488 12 3
„ Receipts ...	1,08,357 0 0	29,079 0 9	31,576 8 6
„ Savings ...	2,000 0 0	.....	.....
Public Gardens	6,290 0 0	2,073 6 0	2,216 4 0
Contribution from Municipal servants towards Pension, &c., Fund	15,000 0 0	3,840 0 10	3,980 2 7
Tramway Rent	36,200 0 0	18,096 1 11	18,096 1 11
Interest and Profit on Investments	1,21,600 0 0	1,06,081 1 1	1,70,297 1 9
	59,50,317 0 0	15,80,783 14 5	20,68,307 10 6
Debt	.....	12,500 0 0	2,50,000 0 0
Bank of Bombay Loan and other Deposit Accounts ...	.....	4,74,457 4 6	15,64,290 4 5
Workshop Recoveries ...	.....	30,053 6 0	26,294 10 2
Advances	.....	78,069 15 4	77,094 7 3
Deposits	.....	73,316 6 9	4,52,708 12 7
Rupees ...	59,50,317 0 0	22,49,180 15 0	44,38,695 12 11
Total Rupees...	75,50,317 0 0	22,92,201 11 8	44,98,294 6 11

FOR THE QUARTER ENDING 30TH DECEMBER 1892, ending 24TH DECEMBER 1891.

	Budget Estimate.	Quarter ending 24th December 1891.	Quarter ending 30th December 1892.
DISBURSEMENTS.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Superintendence	1,90,436 0 0	50,076 10 10	42,368 3 10
Assessment and Collection Department	2,53,996 0 0	56,243 8 6	61,286 11 0
Fire Brigade...	1,37,930 0 0	24,450 13 5	21,724 4 11
Public Gardens	82,297 0 0	11,768 0 0	15,776 8 6
Public Works (Engineer's) Dept. — General Supervision Estt.	41,060 0 0	9,853 11 7	9,737 6 4
Public Works (Engineer's) Dept. — Drainage	1,93,429 0 0	48,877 14 4	45,761 8 3
Public Works (Engineer's) Dept. — Water Works	2,97,010 0 0	†1,96,746 0 7	38,038 11 3
Public Works (Engineer's) Dept. — Streets and Buildings Inspection and Supervision Estt.	87,383 0 0	20,377 8 7	20,382 7 10
Public Works (Engineer's) Dept. — Public Lighting ...	3,34,379 0 0	1,03,337 13 1	77,755 10 11
Public Works (Engineer's) Dept. — Road Watering... ...	82,137 0 0	12,070 5 8	12,387 5 4
Public Works (Engineer's) Dept. — Road Repairs and Maintenance	4,57,547 0 0	1,43,509 9 8	1,03,452 3 8
Public Works (Engineer's) Dept. — Street Improvements ...	1,05,000 0 0	12,516 7 6	29,210 10 10
Public Works (Engineer's) Dept. — Cleaning, Lighting and Repairing Port Trust Wharves	37,642 0 0	37,642 0 0	37,642 0 0
Health Department... ...	14,21,313 0 0	2,83,687 0 5	3,21,255 3 11
Police Charges	4,00,000 0 0	64,571 5 9	64,571 5 9
Education	87,720 0 0	17,464 2 3	20,823 8 8
Hospitals	60,108 0 0	11,901 1 4	9,357 2 1
Miscellaneous	82,045 0 0	30,310 1 5	26,324 15 9
New Works and Reserve Funds	1,13,268 0 0	64,578 6 4	51,214 6 8
Debt (including Sinking Fund deposited with the Bank of Bombay)... ...	21,68,278 0 0	3,96,099 5 8	4,74,293 0 8
	66,32,978 0 0	15,96,081 14 11	14,83,363 8 2
Loan Works Accounts ...	.....	1,13,900 9 4	2,41,095 6 4
Bank of Bombay Loan and other Deposit Accounts ...	.....	3,54,508 1 1	13,53,855 13 9
Workshops	.....	33,585 7 10	25,317 1 6
Advances	.....	1,04,568 8 5	78,963 8 11
Deposits	.....	41,228 8 6	3,99,927 5 8
Rupees...	66,32,978 0 0	22,43,873 2 1	35,82,522 12 4
Closing Balance ...	.....	48,328 9 7	9,15,771 10 7
Estimated Balance on 31st March 1893...	9,17,339 0 0	.....	.....
Total Rupees...	75,50,317 0 0	22,92,201 11 8	44,98,294 6 11

† Includes a net sum of Rs. 1,50,815-4-10 paid to date on account of Tansa and other Water Works executed out of Loan Funds and investment of Surplus Tansa Loan and Interest Funds.

No. 22554 of 18*th January* 1893.

Submitted to the Standing Committee for information.—H. A. ACWORTH, Commissioner.

Read letter No. 22886, dated 21st January 1893, from the Commissioner, to the Secretary, forwarding the following further letter from Mr. Tomlinson on the subject of telephonic communication on the Tansa line, and recommending for sanction the scheme recommended therein, at an additional cost of Rs. 780 per annum.

Letter No. 1211, dated 20th January 1893, to the Commissioner :—

SIR,—I have the honour to state that, as directed in your No. 20305 of the 21st December, I have communicated with the Superintendent, Government Telegraphs, on the subject of telephonic communication on the Tansa Works.

2. The annual rental between the 4 principal siphon stations, 2, 7, 12 and 15 (not 2, 7, 15 and 19) and Tansa Lake and Bombay, would be:—

55 Miles of wire at Rs.	40 ...	...Rs. 2,200
12 Telephones at „	60 ...	... „ 720
		Rs. 2,920

I am to state, however, that this system, which is the cheapest possible, is not recommended, because to establish through communication, each intermediate station would have to be called, and any defect in any single bell or telephone or want of attention or mistake at any intermediate station, would prevent communication.

3. Any improvement upon this system will increase the lengths of wires and of course add to the expense. It is of great importance, however, that the communication on the southern section from Bombay to the sluice above Vehar Lake, where any surplus Tansa water is let out into Vehar Lake, should be established as soon as possible. We have already telephonic communication to Pawai and I have considered an extension of this installation with Mr. Bevan, Superintendent, Telegraphs, Bombay Division. This extension can be carried out for an additional rental of Rs. 780 per annum, and I recommend that this part be sanctioned, leaving the less urgent portion from Vehar to Tansa to be further considered. You are aware that the Telephone Company have requested to be allowed to tender for this work and Government would also require some time to furnish an estimate for whatever system may be adopted. In the meantime we must rely on the use of trollies on the siphon tramways and the telegraph from Railway stations to bring as urgent news from the northern section.

4. The system recommended for the southern section is the establishment at the Kurla Railway station sluice house, of an exchange with wires thence direct to Bombay (already established),

Pawai (already established), Tansa main, Sion sluice house, and Ghatkoper siphon head, and from the last point to Vehar clearing sluice on Tansa line.

The cost will be—

		Rs.	Rs.
Net increase in length of wires (24½—12½) subject to correction or final measurement with Government	12 ms. @ 40		=480
Net increase in number of telephones (7-4)	3 „ @ 60		=180
Indicator connections	4 „ @ 30		=120
Net increase		Rs.	780

We pay for the present Bombay-Kurla-Pawai Line Rs. 740 per annum. The total annual rent for the combined system will therefore be Rs. 1,520 per annum.

5. The Bombay terminus is at the Water Works Stores, De-Lisle Road, Chinchpokli. The cost of an extension to the Municipal Offices would be Rs. 240 per annum, as follows :—

3 Miles wire @ Rs. 40	Rs.	120
2 Telephones @ „ 60	„	120
	Rs.	240

6. I attach a plan showing in red the lines and stations of the system recommended.

7. When a system likely to be the most satisfactory has been agreed upon for the northern section, I will submit the estimates of the Government Telegraph Department and the Bombay Telephone Company.—I have, &c., S. TOMLINSON, C.E., Dy. Ex. Engineer, Water Works.

No. 11078. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 22886, dated 21st instant, the Corporation be recommended to sanction the outlay of Rs. 780 per annum for the cost of telephonic communication for the southern section of the Tansa Water Works, *viz.*, from Kurla to the sluice house at Sion, and from Kurla to the clearing sluice above Vehar Lake, and that the cost be debited to surplus cash balance."

No. 11079. *Resolved* : " That the following be laid on the table :— Letter, dated 21st instant, from Messrs. Ardaseer Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of Receipts and Disbursements at the end of each week for the month of December last, and compared them with the general and subsidiary ledgers and journals, and found them correct. Forwarding the usual summary and statement of their scrutiny of the accounts."

In accordance with notice of motion, it was proposed by A. G. Viegas, Esq.—

"That the Municipal Commissioner be requested to state whether he has provided for verification the standard of grain measure called *pharâ* and whether such measures used in the city are verified and stamped on comparison with such standard *pharâ*."

The motion was seconded by Bhalchandra K. Bhatawadekar, Esq.

The Commissioner stated that there is a standard *pharâ* at the Crawford Markets by which the public measures of that capacity can be tested; but whether the dealers bring their measure for the purpose of being tested was a question which must be ascertained from the dealers themselves, who are not bound to have their weights or measures tested.

The matter then dropped.

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 22nd January 1893.

Resolved : "That, with reference to the Committee's resolution No. 10047, dated 28th December 1892, the following letter from the Commissioner, be *recorded* " :—

No. 11081.

No. 22959 OF 1892-93.

BOMBAY, 23*rd January* 1893.

TO THE MUNICIPAL SECRETARY.

SIR,—With reference to the Standing Committee's resolution No. 10047 of the 28th ultimo, regarding the leasing of a ground at Dadar to one Mr. Hormusji N. Raja for the sale of vegetables, fruits, &c., I have the honor to state that the Superintendent of Markets reports that the owner of the private market at Dadar, who pays a monthly contribution of Rs. 10 to the Municipality, would object to the sale of vegetables in close proximity to his market which would prejudice his interests. He further states that it is not at all necessary to establish a vegetable market at the place in question.

Under the circumstances I have not rented the ground to the party.—I have, &c., H. A. ACWORTH, Commissioner.

The following return was read and *recorded* :—

Return of fires at Mody Bunder (Frere Road), Port Trust Bundar (Mahim), Tardeo Road (Mahaluxmi), Sholapur Street (Wari Bunder), forwarded with the Commissioner's memorandum No. 23012, dated 24th January 1893.†

No. 11082.

* *See* Appendix B. † *See* Appendix C.

Read letter No. 23067, dated 24th January 1893, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honor to state that Messrs. Bhedwar & Co., contractors for laying mains in Forbes and other streets, have claimed extra payment on account of the great difficulty attaching to the work in Nagdevi Street, which involved some danger to house property from blasting. The contractors had also to deal with a very large number of drains and the work was no doubt much more costly than usual or than there was any reason to anticipate. The Mohurram festival also occurred during the progress of the works and the trench had to be closed and again of course re-opened. The Deputy Executive Engineer, Water Works, does not think that payment of the sum of Rs. 300 on account of these extra difficulties will leave the contractors any profit, for they had to cut out rock in some places on account of the danger attached to blasting.

2. Under the circumstances I request the favor of the sanction of the Standing Committee to the payment to the contractors of Rs. 300 in settlement of their extra claim out of savings in the renewed grant for laying additional mains in the city.—I have, &c., H. A. ACWORTH, Commissioner.

Proposed by A. G. Viegas, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

No. 11083. "That, with reference to the Commissioner's letter No. 23067, dated 24th instant, he be requested to obtain details of the probable extra expenses incurred by Messrs. Bhedwar & Co., in carrying out the work under the different heads mentioned in the letter."

Carried.

No. 11084. *Resolved*: "That, as applied for by the Commissioner, sanction be given to the return, on the 31st instant, of their deposit to Messrs. Walsh, Lovett, Mitchell & Co., the contractors for the Tansa Duct Works, the final certificate of the Engineer bearing date 1st February 1892."

No. 11085. *Resolved* : "That sanction be given to the cutting off of water connections as per list accompanying the Commissioner's memorandum No. 23154, dated this day."

Read letter No. 23159, dated this day, from the Commissioner, to the Secretary, as under :—

SIR,—In response to an advertisement calling for tenders for the construction of a Manual Fire Engine Station at Mahim, two have been received :—

	Rs.
Messrs. Gangaram Laxmon & Co.	6,280
Messrs. Mistri, Bhedwar, Vachagandhi & Co.	6,982

The amount of the office estimate for the work is Rs. 5,965.

Both the tenderers were requested to state, whether or not they would undertake the work at the rates in the office estimate. Messrs. Gangaram Luxmon & Co. refused to reduce their tender and Messrs. Mistri, Bhedwar, Vachaghandhi & Co. agree to do the work at the office rates, except as regards item No. 9, hydraulic lime concrete. Their tendered rate for this item is Rs. 65, and they agree to reduce it to Rs. 45, per brass.

There will, however, still be an excess of about Rs. 216, and this can be met out of the contingency provision for the work.

Under the circumstances, I have the honour to request the sanction of the Standing Committee, to my accepting the tender of Messrs. Mistri, Bhedwar, Vachaghandhi & Co., for Rs. 6,180.—I have, &c., H. A. ACWORTH, Commissioner.

No. 11086. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 23159, dated this day, sanction be given to the acceptance by him of the offer of Messrs. Mistri, Bhedwar, Vachaghandhi & Co., for the construction of Manual Fire Engine Station at Mahim, at a cost of Rs. 6,180.

"That the excess of Rs. 216 on the work to be met out of the contingency provision for the work."

BOMBAY, 1*st February* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.C.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B. ; BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M. ; PURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; KAIKHOSRO N. KABRAJI, Esq. ; K. M. SHROFF, Esq. ; R. G. OXENHAM, Esq., M.A. ; ACCACIO G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner ; the DEPUTY EXECUTIVE ENGINEER, Water Works ; and the SECRETARY.

The minutes of the meeting held on the 25th ultimo, were signed.

No. 11310. The seal of the Corporation was affixed to deed of contract with Messrs. John Fleming & Co. for the supply of eight Siemen's water meters.

No. 11311. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 23710, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

Proposed by Bhalchandra K. Bhatwadekar, Esq., seconded by Javerilal U. Yajnik, Esq.—

No. 11312. "That the following be referred to the Sub-Committee appointed on 14th December last, to report on the further excess of Rs. 1,00,000 on the Tansa Water Works :—Memorandum No. 23241, dated 26th

January 1893, from the Commissioner, forwarding letter No. 3552, dated 25th idem, from the Chief Accountant, and requesting that the charge of Rs. 2,500 on account of a casket supplied by Messrs. Hamilton & Co. in connection with the Tansa opening ceremony be included in the Tansa revised estimates.

"That the Commissioner be requested to furnish the Standing Committee with details of the expenditure of Rs. 20,000 on the opening ceremony."*

Carried.

Read letter No. 23599, dated 30th ultimo, from the Commissioner, to the Secretary, as under:—

SIR,—With reference to the Standing Committee's Resolution No. 10815 of 18th instant, and previous Resolution No. 7748 of 26th October last, I have the honor to say that we have been distinctly advised by our Solicitors that the Municipality are under no sort of liability either for damages or costs in this case. They write under date 17th September last:—"Mr. Justice Parsons has "distinctly held that sufficient care and precaution were not taken "by the contractors in carrying out the drainage work alongside "the plaintiff's premises, and that the result was that the plaintiff's "house was undermined, its foundations slipped and walls cracked, "and it became unsafe and ruinous, and this finding appears to be "amply sufficient justification for charging all the damages and "expenses incurred by the Municipality to the contractor's account."

Clause XVI of their contract runs as follows:—

"The contractors shall be responsible for all risks to the work "and shall make good at their own cost all loss or damage whether to "the works themselves or to any other Municipal property, or to the "lives, persons, or property of others, from whatsoever cause arising "during the progress and maintenance of the works; and in case "the Commissioner shall be called upon to make good any such "costs, loss or damages, the amount which he may pay in respect "thereof and the amount of any costs or charges which he may "incur in reference thereto, shall be charged to the contractors. "The Commissioner shall have full power and right to settle any "claim which may be made for damage, and such settlement shall "not therefore be called in question by the contractors, but they "shall be bound to accept such settlement as final."

I can find no ground for doubting that the contractors are as fully liable as the Solicitors believe them to be.

2. I enclose two reports by the Executive Engineer, one No. D 360 of 22nd April 1892, and one No. D 5198 of 22nd November 1892, in which the facts are set forth according to the apprehension of that department and the contractors' appeal to the Corporation is discussed. There is nothing in the latter, which,

* The last paragraph was added on the suggestion of Mr. Abdulla M. Dharamsi.

as far as I can see, raises any valid claim for indulgence. It is idle to say that the contractors were directed in pursuance of their contract to commence drainage operations. They were not directed to do so without taking proper precautions, and though the Drainage Department consider that the damage to the house was caused primarily by its bad condition and not by the drainage operations, still the judge has held the contrary; the contractors were given the opportunity of appealing, if they held the same view; they did not choose to appeal, and it seems useless to go back upon the question. When the chawl was seen to be unsafe it was removed under the orders of the Building Department, quite independently of the Drainage Department. The contractors try their own case over again in their letter No. 96 of 14th September 1892, but as it has been tried in the High Court and decided, I do not care to follow them in a review of the facts. The contractors disputed their liability under clause XVI. of their contract. As to this the Corporation will no doubt be guided by the views of their legal advisers, and will probably concur with me, that if the contractors had in reality the slightest doubt as to the law of the case, they would not address an appeal for indulgence to the Corporation. That appeal for indulgence I cannot support in the teeth of the distinct finding of the High Court, and in the total absence, as far as I can see (and the Solicitors with whom I have personally discussed the question agree with me), of any contributory negligence on the part of any officer or servant of the Corporation.—I have, &c., H. A. ACWORTH, Commissioner.

No. 11313.

Resolved: "That, with reference to letters, dated 18th October 1892 and 13th January 1893, from Mr. Sittaram Luxamon, regarding the damage done by him, as Drainage Contractor, to a building at Haines Road, Agripada House-connection district, the Standing Committee beg to forward to the Corporation herewith letter No. 23599, dated 30th ultimo, from the Commissioner, and accompaniments thereto, and to remark that the Municipal Solicitors advise that the Corporation are under no sort of liability either for damages or costs in this case. The Hon'ble Mr. Justice Parsons in his decision distinctly held that sufficient care and precaution were not taken by the contractors in carrying out the drainge works alongside the Plaintiff's premises, and that the result was that the Plaintiff's house was undermined, its foundations slipped and walls cracked, and the house became unsafe and ruinous. The Solicitors add that this finding appears to be amply sufficient justification for charging all the damages and expenses incurred by the Municipality to the contractors' account."

Resolved : " That the following be referred back to
No. 11314. the Commissioner with the request that he will favor the Committee with details of the expenditure incurred :—Letter No. 23308, dated 27th January 1893, from the Commissioner, stating that, with a view to guard against loss of records in their transfer from the old to the new offices and to avoid confusion in the removal of both records and furniture of the different departments on the 14th and 15th idem, clerks were sent in charge of records, and sepoys of furniture. Requesting sanction to the payments of actual travelling expenses to the clerks for journeys, backwards and forwards on the days mentioned and of an allowance of 4 annas per day to the sepoys."

Resolved : " That the following be *recorded* :—Letter
No. 11315. No. 23444, dated 28th January 1893, from the Commissioner, reporting that he has accepted the tender of Mr. Rahim Meheralli, the lowest of the three tenders received, for the supply of wood for cremation purposes at Haines Road burning ground, during 1893-94 at Rs. 3-3-0 per candy."

Resolved : " That, as applied for by the Commissioner,
No. 11316. in his letter No. 23552, dated 30th January 1893, and under the circumstances stated therein, sanction be given to the acceptance by him of the tender of Messrs. Moosabhai Adamji & Son, the second lowest of the three tenders received for the supply of surveying and drawing materials during 1893-94, at schedule rates.

Resolved : " That, as applied for by the Commissioner, in
No. 11317. his letter No. 23553, dated 30th January 1893, sanction be given to the acceptance by him of the tender of Messrs. Moosabhai Adamji & Son, the lowest of the three tenders received, for the supply of stationery during 1893-94, at schedule rates."

"2. That the following be *recorded* :—Letter No. 23553, dated 30th January 1893, from the Commissioner, reporting that Mr. Hasan M. Khetsey has offered to supply blue-black and red ink prepared by himself at As. 8 and As. 6 respectively per imperial quart and pint. Stating that these rates are less than those charged for Stephens' ink, and that it is intended to give the new ink a trial during the ensuing year."

Read letter No. 23556, dated 30th ultimo, from the Commissioner, to the Secretary, as under:—

SIR,—Referring to the resolution of the Standing Committee, No. 5496, dated the 24th August last, I have the honor to state that the papers on the subject having been forwarded to the Municipal Solicitors as therein directed, they have returned the same with their letter, dated the 10th December 1892, copy of which is hereto attached, expressing their doubt as to the successful issue of proceedings, if taken. It will be seen from the letter that it was intended, in 1876, to declare the lane in question a public street, after it had been repaired at the expense of the house-owners. The expenditure incurred, it appears, was recovered from them. But the lane was not formally declared a public street. I have now issued orders to the Executive Engineer's Department to take steps to declare it such.

2. Under the circumstances, I request the favor of the sanction of the Standing Committee and Corporation to the writing off of the amount of the Road Department Bill, Rs. 1,150-14-6, and that of the Drainage Department Bill, Rs. 11-9-3, or Rs. 1,162-7-9, being the total expenditure incurred in repairing the lane.—I have, &c., H. A. ACWORTH, Commissioner.

BOMBAY, 10*th December* 1892.

TO THE ACTING EXECUTIVE ENGINEER, Municipality.

SIR,—In acknowledging the receipt of your No. 8647B, dated the 10th ultimo, we have the honor to state that a careful perusal of the file of papers therewith forwarded on the subject of the repairing, metalling, levelling and draining Dookerwady Lane in the year 1876, suggests to us a doubt as to whether it may not be contended with considerable force that on the completion of the works at the expense of the owners in 1876 the lane had in fact become a public street.

We draw your attention particularly in this connection to the form of notice (which we have marked in the file) addressed by the Deputy Executive Engineer in 1875 to several of the owners of properties abutting on the street in which a decision of the Corporation to declare the street a public one when the work should be completed, is expressly referred to, and we also draw your attention to the Municipal Commissioner's No. 2690 of 1876 (also marked), in which he enquires whether the estimate then before him "includes all that is required to "make the street fit to be taken over as a public one under Sec-"tion 159 of the Act of 1872, *i.e.*, does it include the cost of "metalling and levelling, as well as of a sewer," &c. In consequence of this the estimate was revised and the cost of metalling, levelling, &c., was included. The expenses of these works appear to have been recovered from the owners of the adjoining properties,

and having regard to the decision of the Corporation referred to in the Deputy Executive Engineer's notice above referred to, and to the terms of Section 159 of the Municipal Act of 1872, which was then in force, it may apparently, with some reason, be urged that, whether or not there has ever been any formal declaration that the street is a public street, it certainly does appear to have been represented to the parties that it would be declared as such. The papers before us go to show that the question which was raised in Zaoba's cart case can hardly arise in the present case, as there can apparently be no doubt that the public have had uninterrupted passage and access over the Dookerwady Lane for upwards of 20 years. It is, we think, clearly a street, and the only question seems to be whether it is a public street or a private one. Before taking proceedings on the footing of its being the latter, it is desirable that it be clearly ascertained that it certainly is not the former.

All the papers are returned herewith for reference and we shall be glad to have them back as soon as possible with such instructions as you may be able to give us upon the point above suggested.—We have, &c.,

CRAWFORD, BURDER & Co.

No. 11318. *Resolved*: "That letter No. 23556, dated 30th January 1893, from the Commissioner, and its accompaniment, be forwarded to the Corporation with a recommendation that sanction be given to the writing off of Rs. 1,162-7-9, being the expenditure incurred by the Road and Drainage Departments in repairing, levelling, &c., Dookerwady Lane.

"2. That the Committee's resolution No. 5496, dated 24th August last, sanctioning the filing of a suit against the owners of premises in that lane for the recovery of the cost so incurred be rescinded, it being now ascertained that the lane is a public street."

No. 11319. *Resolved*: "That the following be *recorded*:—Letter No. 23457, dated 28th January 1893, from the Commissioner, reporting that he has sanctioned the purchase from Messrs. Walsh, Lovett & Co. of 10 Morris' copper branch-pipes, at Rs. 18 each, and 10 Morris' double outlet copper stand-pipes, at Rs. 68 each, for watering the roads with Merryweather's patent hose. The cost, Rs. 860, to be met out of section 6, road watering, Engineer's budget."

No. 11320. *Resolved*: "That the following be *recorded*:—Letter No. 23588, dated 30th January 1893, from the Commissioner, reporting that he has sanctioned.

the purchase of one Travancore silver tea-set from Mr. Nagindas Tribhovandas for Rs. 510-15-0 for the artware collection of Victoria and Albert Museum. The amount to be met out of the grant for collection of artware."

No. 11321. *Resolved* : "That the following be *recorded* :—Letter No. 23555, dated 30th January 1893, from the Commissioner, reporting that he has let one room of the chawl lately purchased from Mr. Damodar Tapidas for the extension of the Victoria Gardens, to one Mr. J. DeMello at a monthly rental of Rs. 8.".

No. 11322. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 23435, dated 28th January 1893, sanction be given, under section 172 (2) of the Municipal Act, to the charging of special halalkhor tax to the following Port Trust properties at the rates shown against each property, *viz* :—

Ward No.	Street No.	Street.	Description of Property.	Nature of service rendered.	Special rate per mensem	Remarks.
					Re. a. p.	
A 898 ...	10-12-14 / 16-18-20	Wellington Pier.	Bunder Fees Office, Post Office, Store room, Custom Chowkey and WaterPolice Station.	... ..	1 0 0	
E 5797...	40	Dockyard Road..	Chowki	Nominal....	0 8 0	

Considered the following :—

No. 223.

GENERAL DEPARTMENT.

Bombay Castle, 23rd January 1893.

Letter from the Municipal Commissioner for the City of Bombay, No. 393, dated 6th April 1892 :—

"I have the honour to report that Government Resolution No. 357 of 6th February, General Department, was duly laid before the Corporation. In the course of the debate which ensued much stress was laid on the importance to the Corporation of modifying the terms, if Government would agree to do so, so as to constitute a defined liability and no less upon the extreme advisability in the case of such a body as the Municipality of acquiring the ground as a permanent possession instead of being put in the position

of lessees, subject to periodical increments of rent, the extent of which it was impossible for them to foresee. It was hoped that Government would be inclined to grant some consideration to the fact that the object of acquisition was not profit, but the satisfaction of a need of public sanitation; and though no doubt through the action of the Municipality it is probable that the acquisition may prove profitable to the City, there is nothing to prevent this consideration entering into the question of present price. The Corporation therefore hope that Government will be pleased to sell the land to them out and out, and I may add, on my own account as Commissioner, that it would be an equal advantage if the 407½ acres already held on lease by the Municipality in Chembur could be treated in the same way.

"2. I desire to add, with reference to the Government Resolution under discussion, that the Corporation would be glad to know what the present market value of the land is deemed to be, and also in the event of a lease being insisted on, what the fixed proportion of the market value chargeable after 50 years, and then at each decennial revision would be, if Government are in a position to pass definite orders on such a point."

Memorandum from the Commissioner, N. D., No. 3469, dated 28th September 1892—Transcribing, with reference to Government memorandum No. 1206, dated 11th April 1892, a report of the Collector of Thana, on the subject of the land required by the Bombay Municipality for the disposal of the town sweepings; and making remarks.

Letter from the Municipal Commissioner for the City of Bombay, No. 16957, dated 4th November 1892.

RESOLUTION.—His Excellency the Governor in Council regrets that Government Resolution No. 357, dated 6th February 1892, was not sufficiently clear, but the Commissioner, N. D., has correctly interpreted it.

2. The Municipal Commissioner should be informed that Government have no intention of selling the land outright, and that the lease is offered, subject to the further condition that Government should have the option of renewing or terminating it at the end of the term of 50 years.

3. As to the present market value Mr. Acworth should be informed that Government estimate it at Rs. 100 per acre, and that as they consider the terms offered to the Municipality are, in view of the comparatively small expenditure to be incurred in reclamation, and the probable profits which the Corporation will make from the reclaimed land, sufficiently liberal, there is no reason further to modify the terms proposed.

W. L. HARVEY,
Under Secretary to Government.

No. 23210 OF 1893.

BOMBAY, 26*th January* 1893.

Copy forwarded to the Municipal Secretary for information with reference to the Resolution of the Standing Committee, No. 14002, dated 16th March last.

H. A. ACWORTH,
Commissioner.

Resolved : " That memorandum from the Commissioner, No. 23210, dated 26th ultimo, forwarding Government Resolution No. 223, General Department, dated 23rd idem, be forwarded to the Corporation, and that in the meantime the Commissioner be requested to ascertain from Government whether Government will consent to lease the land to the Municipality for a term of 50 years with a proviso giving the Corporation the option of terminating the lease on 6 months' notice on the expiration of each successive period of 10 years."

No. 11323.

Read letter No. 22733, dated 19th ultimo, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honor to forward a petition addressed to the President, which was placed in my hands, on 5th instant, by a deputation of residents on Colaba Causeway. The petitioners are mistaken in saying that the district is served by only nine cesspool carts. The correct number is eleven. But no number of cesspool carts can altogether obviate the cause of complaint or be trusted to serve an area of any extent which is fully populated. The stirring up of cesspools when they are emptied, the splashing out upon the ground of part of the contents of buckets, and the failure to completely remove the cesspool matter are, except the last, inseparable from a cesspool system. The last grievance might be remedied by the use of a pump, and this has been tried, but not with good results. It was found that the labour required was great and the process slow.

2. I cannot recommend the temporary remedy of a large iron tank which the memorialists propose, as I do not think the expense would be justified in view of the probable early sanction to the sewerage of the district. But I do most strongly urge upon the Corporation the vital necessity of according this sanction at the earliest possible date. Both the Port Trust and the B. B. & C. I. Railway Company have appealed to Government to use their powers under section 245 of the Act, to close the drain outfall south of the Gun Carriage Basin, and the B. B. & C. I. Railway have just given me notice of an action in the High Court to obtain an injunction against the Municipality with regard to the same drain. There does not appear to me to be now any valid reason remaining for delaying the commencement of the sewerage works. I have recommended the adoption of the Shone system, and estimates and plans on that system have been for some time before the Corporation, and only need to be sanctioned. I have heard that Mr. Ault, of the firm of Shone and Ault, is on his way to Karachi with reference to the sewerage of that town. I should be glad if his firm would undertake the sewerage of Colaba, provided they can do so within the Engineer's estimates, and Mr. Ault may perhaps think it worth his while to come to Bombay to enquire into the matter. But I would not with this view advocate a single month's further delay in the commencement of a project which is on all hands and for so many reasons so urgently demanded.—I have, &c.,

H. A. ACWORTH,
Commissioner.

No. 11324. *Resolved* : "That, with reference to the petition addressed to the Corporation by residents of Colaba, on the subject of the want of means for carrying off the sullage from the cesspools of houses in that locality, the Standing Committee beg to forward herewith a report No. 22733, dated 19th January 1893, from the Commissioner, on the subject, and to express their concurrence with Mr. Acworth as to the necessity of early steps being taken to proceed with the sewerage of Colaba."

No. 11325. *Resolved*: "That the following be forwarded to the Commissioner for favour of remarks :—Letter, dated 5th January 1893, from Mr. Nursingrao Sayaboo Vadnala, to the Secretary, forwarding memorial addressed to the Corporation by the residents of Kamathipura, requesting that the sanitary condition of that locality may be improved."

Resolved: "That the following be *recorded*:—Memo-
No. 11326. randum No. 23532, dated 30th January 1893, from the Commissioner, forwarding statement of houses or portions of houses which fell during the month of December last:—

No.	Ward.	Street No.	Locality.	Names of Owners.	Description of Building.	Age of Building or date of erection (if known).	Date of fall.	Cause of fall.	Part fallen.	Casualties. Persons injured.	Casualties. Persons killed.	Estimated loss.	Whether or not action taken by the Municipality.	Whether or not warning given to the parties.	REMARKS.
1	B	23 | 24	Chinch Bunder Road	Raghunath Wasudeo	House	...	22nd Dec. '92.	Decayed wood work.	A portion of the floor of 2nd story	Nil.		Rs. 25	Warning given to inmates and action taken to remove the unsafe portion.		

Resolved: "That the following be referred to the Commissioner for disposal and that the applicant be informed accordingly:—Letter, dated 27th January 1893, from Mr. Narsidass *alias* Gokuldas Anandjee, on the subject of refund of taxes." No. 11327.

The following statement * was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 29th January 1893.

Read letter No. 3633, dated 31st ultimo, from the Chief Accountant to the Commissioner, as under :—

SIR,—With reference to the correspondence ending with this office No. 3276, dated the 23rd ultimo, on the subject of the payment of the reduced instalment of Rs. 9,500 per mensem, on account of the Vehar Water Works debt from 1st January 1893 as provided in the current year's Budget, I have the honor to point out that under the circumstances stated in the Under-Secretary's No. 4707, dated 20th December 1892, (General Department), the payment of the full instalment of Rs. 14,600 per mensem is to be continued by us until the passing of the necessary short Act legalizing the payment of the reduced instalment. If the Act be not passed and confirmed before the 1st April next, the payment already made in the current month and those to be made in the next two months, at Rs. 14,600 per mensem, would cause an excess of Rs. 15,050 over the provision made in the current year's Budget for the repayment of the Vehar Debt.

2. The above excess, if it does occur during the current year, would merely be a temporary one, as the same would be adjusted after the passing of the short Act against the future instalments to be paid by us.

3. Under these circumstances may I request the favour of your obtaining the sanction of the Standing Committee and the Corporation to the excess in question being met, if necessary, by a transfer from savings in the interest provision for the Tansa Loan of Rs. 1 crore and 47 lakhs as per accompanying transfer statement.—I have, &c., Sorabji Navaroji Cooper, Chief Accountant.

No. 23681 OF 1*st February* 1893.

Submitted to the Standing Committee and Corporation for favour of sanction.

H. A. ACWORTH, Commissioner.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 23681, dated this day, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be No. 11328.

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* *See* Appendix B.

given to the transfer of Rs. 15,050 from savings in the grant for interest on the Tansa Water Works loan, to same head, Vehar Water Works instalments, to meet excess on the latter head, due to the full instalment of Rs. 14,600 per month being required to be paid to Government in January, February and March 1893, instead of the reduced instalment of Rs. 9,500 per month as provided for those months in the Budget for 1892-93, and as payable on the passing of the necessary short Act authorising the payment of the reduced instalments on account of interest and repayment of the Vehar Water Works debt."

No. 11329. *Resolved* : " That the following be *recorded* :—Letter No. 23682, dated this day, from the Commissioner, reporting that he has accepted the tender of Mr. Lakhmidas Shamji, the lower of the two tenders received, for the work of widening a portion of Walkeshwar Road near the junction with Ridge Road. The amount Rs. 4,113 to be met out of the grant of Rs. 4,743 provided in the current year's Budget for this work."

No. 11330. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 23721, dated this day, sanction be given to the acceptance by him of the tender of Messrs. Hasanalli Mulla Hakimjee and Brothers, the lowest of the three tenders received, for the supply of timber during 1893-94 at schedule rates."

No. 11331. *Resolved* : " That, with reference to the Committee's Resolution No. 11084, dated 25th ultimo, be it *resolved* : ' That, although clause 27 of the contract with Messrs. Walsh, Lovett and Mitchell for the construction of the Tansa duct from Tansa dam to Ghat-Kopar provides that the amount of their deposit shall be retained until the expiration of twelve calendar months (from and after the date of the passing of the final certificate by the Engineer) and until all claims and demands which have been made against the Commissioner or against the Corporation for, or in respect of, damages or loss by, from, or in consequence of the works having been finally satisfied or withdrawn, the said deposit may now be returned to the contractors, provided the contractors will be responsible for all claims and demands that may arise in excess of the amount still remaining to be paid to them.' "

Resolved: "That Resolution No. 10810, dated 18th January 1893, be amended as follows :—

No. 11332. 'That, as recommended by the Commissioner, in his letter No. 21456, dated 7th January 1893, sanction be given to the acceptance by him of the tender of Messrs. Bhojabhoy Allarakhia & Co., for the supply of grain during 1893-94 at the following rates, and provided that they reduce their rates for ooreed from Rs. 37-13-0 to Rs. 37-9-0, bran from Rs. 27 to Rs. 26-4-0, matra from Rs. 27-8-0 to Rs. 27-4-0, and salt from Rs. 43 to Rs. 42-4-0 per 1,000 lbs :—

Ooreed, Rs. 37-9 per 1,000 lbs. ; Gram, Rs. 38 do. ; Bran, Rs. 26-4 do. ; Oil-cake, Rs. 46 do. ; Salt, Rs. 42-4 do. ; Barley, Rs. 36 do. ; Matra, Rs. 27-4 do. ; Rice Rs. 41 do.

"That sanction be also given to the acceptance of the tender of Mr. Bhojabhoy Allarakhia for the supply of hay, green grass and rice straw during 1893-94 at the following rates:—

Hay, Rs. 9-13-0 per 1,000 lbs. ; green grass, Rs. 5 do. ; Rice straw Rs. 6-13-0 do.

BANDORA SLAUGHTER HOUSES.

	Per 1,000 lbs. Rs. a. p.
Hay	8 12 0
Rice straw	6 13 0
Green grass	3 12 0"

BOMBAY, *8th February* 1893.

AT the meeting of the Standing Committee held this day, there were present :

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B. ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; K. M. SHROFF, Esq. ; R. G. OXENHAM, Esq., M.A. ; ACCACIO G. VIEGAS, Esq., L.M. & S. ; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner ; and the SECRETARY.

Mr. Viegas drew attention to the fact that Resolution No. 11312 was seconded not by himself, but by Mr. Javerilal U. Yajnik.

The Chairman said the minutes would be corrected accordingly.

The minutes of the meeting held on the 1st instant, were then signed.

The seal of the Corporation was affixed to deed of agree-

No. 11806. ment between Bai Dinbai, widow and executrix of the late Mr. Nasserwanji Manockji Petit, and the Corporation, securing to the Municipality the right

to acquire, at any future time, the set-back of property at Nos. 218—222, Colaba Road, without payment of any compensation in respect of the unauthorised work, indicated on the plan annexed to the deed and at the rate of Rs. 20 per square yard for any land shown on the plan, scored red, to be there taken up, inclusive of any loss, damage or expense sustained by her by reason of such acquisition.

That on the execution of this deed and on the execution of similar deed the Commissioner be asked to give the Standing Committee inspection thereof.

No. 11807. *Resolved*: "That, as applied for by the Commissioner, in his memoranda Nos. 23758 to 23764, dated 2nd instant, and Nos. 24035 to 24038, dated 6th idem, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of Owners.	Where.
Mr. Muncherji Soral ji...	Building at DeLisle Road.
„ Gangaram Raghoji	Do. at Gilder Street.
„ Ramlun	Do. at Nesbit Road, Byculla.
„ Nathu Valji	Do. at Lady Jamsetji Road.
„ Madhavrao Bhaskerji	Do. at Mahaluxmi Compound.
„ Limji Maneckj Parack	Do. at Girgam Back Road.
„ Visram Mowji	Do. at Mahaluxmi Compound.
„ Karimji Tayabji	Do. at No 7, DeLisle Road.
„ Framji Hormasji Javeri, mortgagee to Mr. Nana Bapu... ...	Do. at Parel Road (Lalwadi).
Bai Papubai, widow of Ismail ...	Do. at Butcher Street, Mazagon.
Mr. Issoofali Ismaelji	Do. at No. 74, Ripon Road."

No. 11808. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 24258, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

Read letter No. 11600, dated 3rd February 1893, to the Chairman, as under :—

SIR,—I have the honour to inform you that, at the meeting of the Sub-Committee appointed on the 14th December 1892, on the question of the further excess on the Tansa Water Works of Rs. one lakh, held on the 1st instant, it was agreed that the Standing Committee be recommended to apply to the Corporation for sanction to the advance of Rs. 50,000 in order to allow of the settlement of bills in respect of which there is no question and which are for works already completed.—I have, &c., H. W. BARROW, Municipal Secretary.

Also letter No. 24096 to the Municipal Secretary, dated 6th instant, as under :—

SIR,—The revised estimates for the Tansa Water Works, which were referred to the Standing Committee under Corporation Resolution No. 9683 of 8th December 1892, and the Standing Committee to a Sub-Committee, have now been referred back by the latter body in order to be recast. The excess for which sanction has been asked is about one lakh. In the meantime there is a large number of bills outstanding, which, it is very desirable, should be paid off, and which cannot be paid without sanction. I enclose a list forming a total of Rs. 57,904-3-11 and request that sanctions may be accorded to the payment of them in anticipations of the passing of the revised estimates.—I have, &c., H. A. ACWORTH, Commissioner.

Proposed by A. G. Viegas, Esq., seconded by Javerilal U. Yajnik, Esq.—

"That the consideration of the Commissioner's letter No. 24096, dated 6th instant, be postponed until next meeting to allow of the inspection of the list of the liabilities submitted with the letter, and that, in the meantime, the Sub-Committee be requested to make a preliminary report embodying such recommendations in respect of works already completed as they may think fit."

No. 11809.

Carried.

Read letter No. 23720, dated 1st instant, from the Commissioner to the Secretary, as under :—

SIR,—For the supply of sand-stone, sand, shells and shingle during the year 1893-94, three tenders have been received and the rates are quoted below for the information of the Standing Committee :—

	Amruta Babaji, Vachaghandi Bhedwar & Co.	Tejoo Kajee & Co.	Vishnu Narsingrao & Co.	Per brass of 100 c. ft.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Sand-stone quarried out of Bombay	22 8 0	*Nil.*	*Nil.*	...
Do. in Bombay ...	7 10 0	7 14 0	8 0 0	...
Sea-sand	12 0 0	15 0 0	19 0 0	...
Shingle	11 0 0	14 0 0	16 0 0	...
Shells	15 0 0	15 4 0	16 0 0	...
Thana Sand	8 0 0	9 0 0	9 8 0	...

It will be seen that the tenderers, Nos. 2 and 3, have not quoted their rates for sand-stone quarried out of Bombay. These two tenderers, after the tenders were received, were called upon to quote rates for sand-stone quarried out of Bombay, but they declined to quote any rate and stated that sand-stone of the quality required for

our purposes is not procurable out of Bombay, and that the only place where sand-stone can be obtained, though of very inferior quality, is the district of Alibag. The quality procurable from this place is limited and it can be supplied only during the fair season when boats ply between Alibag and Bombay, but the rate quoted in the tender No. 1, which is the lowest, is so high as to be quite prohibitive, and the Standing Committee will agree with me that we must continue to use sand-stone quarried in Bombay. On the 9th ultimo, the tenderers No. 2 wrote to me that the rate of Rs. 7-14-0 for sand-stone quarried in Bombay includes the cost of filling up the quarries, and that they would reduce their rate if they were not required to fill them up. But bearing in mind the fact that we are taking stringent measures against the owners of quarries to compel them to fill them up, about which frequent complaints have been received by the Corporation, and the Standing Committee and myself, and also the fact that no mention of filling up the quarries was made in their tender, nor when they were called upon to quote a rate for sand-stone quarried out of Bombay, they were not asked to reduce their rate as it would appear that they are trying to outbid the lowest tenderers whose rate for sand-stone quarried in Bombay includes the cost of filling up the quarries. Under the circumstances I have the honour to request the sanction of the Standing Committee to my accepting the tender of Messrs. Amruta Babaji, Vachagandi, Bhedwar & Co., the lowest of three tenders received, at the rates given above.—I have, &c., H. A. ACWORTH, Commissioner.

No. 11810. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 23720, dated 1st instant, sanction be given to the acceptance by him of the tender of Messrs. Amruta Babaji, Vachaghandi, Bhedwar & Co., the lowest of three tenders received, for the supply of the following articles during 1893-94, *viz.* :—

	Per brass of 100 cubic ft.
Sand-stone quarried in Bombay	Rs. 7 10 0
Sea-sand	„ 12 0 0
Shingle	„ 11 0 0
Shells	„ 15 0 0
Thana Sand	„ 8 0 0"

No. 11811. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 24006, dated 4th instant, sanction be given to the acceptance by him of the tender of Messrs. Amruta Babaji, Vachaghandi, Bhedwar & Co., the lower of the two tenders received, for the supply of clean red earth required for filling in purposes as follows :—For filling in cutchra-deposits on the Flats during 1893-94 at Rs. 2-4-0 per brass delivered thereon, and Rs. 2-6-0 per brass for earth delivered elsewhere."

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 23964, dated 4th instant, the Corporation be recommended to sanction the writing off of Rs. 2,571-10-8 from the live stock return of the Health Department, being the book value of 39 bullocks that died, and one bullock that was destroyed, during the quarter ending 30th November 1892."* No. 11812.

Considered letter No. 41249, dated 2nd February 1893, from the Executive Engineer to the Commissioner as under :—

SIR,—With reference to the provision with the Loan Works Budget of clerical staff for conducting the correspondence and account work in connection with the construction of the several Fire Brigade Stations, it appears to me to be advisable that a competent person should be appointed, who would be able to help me in conducting correspondence with the Deputy Executive Engineers, Suprintendents, and others in connection with the works.

II. I would therefore respectfully suggest, for your approval, that, instead of two clerks on Rs. 40 and 35, one clerk on Rs. 75 be appointed. This clerk will also supervise the work of the other inferior clerks who would be appointed from time to time as the works progress and the necessity for keeping them arises.

III. If the above suggestion meet with your approval, I would beg the favour of your sanction to the appointment of Mr. Merwanjee Muncherjee Banaji to the post. He is at present a clerk in the Presidency Executive Engineer's office on a salary of Rs. 70 per month, and being a competent man I should like to secure his services as he would also help me as a personal clerk.—I have, &c., M. C. MURZBAN, Executive Engineer, Municipality.

No. 23985 OF *4th February* 1893.

Submitted to the Standing Committee for favour of sanction.

H. A. ACWORTH, Commissioner.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 23985, dated 4th instant, sanction be given to the appointment of one clerk to be employed in conducting the correspondence and keeping the accounts in connection with the building of No. 11813.

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* *Causes of death* :—8 inflammation of liver, heart, &c.; 16 old age and general debility ; 4 disease of lungs ; 1 abcess in heart ; 3 congestion of brain, &c ; 1 inversion and rupture of small intestines ; 2 cancer of horn ; 3 enlargement of spleen, &c. ; and 1 flatulent colic. Total 39 died and 1 destroyed. Total died and destroyed 40.

Where died &c.:— 24 Sankli Tank Bullock Hospital, 4 Kamathipura E Ward Stables, 7 Bori Bandar Stables, 1 Foras Road Stables, 3 Null Bazzar Stables, and 1 Kamathipura N. Branch Stables. Total 40. Quarterly percentage of losses on the whole strength (1996) of bullocks, 1·9.

Fire Brigade Stations on Rs. 75 per mensem, instead of 2 clerks on Rs. 40 and 35, respectively, as provided in the Loan Works Budget."

No. 11814. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 24069, dated 6th instant, sanction be given, under section 92 (*b*) of the Municipal Act, to his leasing, to the Commissioner of Police, the following plots of Municipal ground as sites for Police chaukies on sufference for one year, the chaukies to be removeable at three months' notice, and at the undermentioned rates :—

No. as per plan.	Names of Roads.	Rent to be charged at 5 per cent. on the value of ground per annum.	REMARKS.
		Rs.	
1	Marine Street near Town Hall and Custom House	149·44	
2	Colaba Road	2·53	
3 A	Queen's Road near Marine Street	6·32	
3	Queen's Road	4·86	
4	Carnac Road and Market Road	158·65	...
5	Chinch Bunder Road near Elphinstone Overbridge	11·38	
6	Queen's Road	4·86	
7	Pedder Road	1·77	
8	Pedder Road near Altamont and Gowalia Tank Roads	1·77	
10	DeLisle Road and Haines Road	1·26	
11	Bellasis Road	8·79	
12	Wari Bunder Road and Belvedere Road ..	1·26	
13	Grant Road near the two tanks...	2·13	
14	Falkland Road and Foras Road	26·36	
15	Near the junction of Mount Road, Mazagon and Dockyard Roads	14·29	
16	Sankli Street and Haines Road	35·98	
17	Lady Jamsetjee Road, Portuguese Church Street and Dadar Road	1·19	
18	Lady Jamsetjee Road	·30	
19	Lady Jamsetjee Road near Mahim Bazar Cross Road	·59	
20	Custom Road near the Junction of Lady Jamsetjee Road	1·48	
21	Cleveland and Warli Roads	4·00	
22	Near the junction of Warli, Fergusson, Haines and Mahaluxmi Roads	·44	
23	D. Lisle Road and Carroll Road...	4·26	
24	Near Arthur Road and DeLisle Road	2·20	

The consideration of the Commissioner's letter to the Secretary, No. 23907, dated 2nd instant, regarding the question of an apparatus for saving persons from drowning was postponed until the next meeting.

* No No. 9 is shown in the Commissioner's List.

Resolved : "That the following be *recorded* :—Letter, dated 2nd instant, from Mr. C. B. DeAbreo, on the subject of his complaint regarding the sale of stale meat to him by a butcher at the Dadar Market."

No. 11815.

The following statement* was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 5th February 1893.

Resolved : "That, with reference to Mr. Bechardas Morlidhur's application, regarding the drainage of his chawl at Falkland Road, dated 16th January last, the Corporation be informed that the Commissioner reports that the applicant has agreed to disconnect the drain of the premises from the storm-water drain and to connect it with the main sewer as required by the Municipality."

No. 11816.

Resolved : "That, as applied for by the Commissioner, in his letter No. 24186, dated 7th instant, sanction be given to the acceptance by him of the offer of the Manager, Bombay Gas Company, to supply country coke from time to time during 1893-94 at Rs. 20-8-0 per ton.

No. 11817.

"That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary as the Company are the only persons in Bombay who make coke."

Resolved : "That the following be *recorded* :—Letter No. 24095, dated 6th instant, from the Commissioner, reporting that he has sold the right to gather, up to end of May next, Chickoo and Bakooly crops in the Victoria Gardens to one Ganu Tukaram for Rs. 90.†

No. 11818.

Resolved : "That, as adplied for by the Commissioner, in his letter No. 24234, dated this day, sanction be given to the acceptance by him of the tender of Messrs. Jivanji Dhanjibhoy & Co., the lowest of 8 tenders received, for the construction of a road over the Tansa main from Dadar to Matunga. The cost, Rs. 1,18,776, to be met out of the 15 lakhs loan for roads in Agripada and elsewhere."

No. 11819.

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* *See* Appendix B.

† Last year the sale realised Rs. 10.

Resolved : "That, as applied for by the Commissioner, in his letter No. 24222, dated this day, sanction be given to his accepting the offer of Mr. Lakhmidas Shamji for the work of constructing a Manual Fire Engine Station at Bhuleshwar at a cost of Rs.10,908."

No. 11820.

Read letter No. 24263, dated 8th instant, to the Secretary, as under :—

SIR,—I have the honour to state that 5 tenders, received in October last, for the work of filling in a portion of Baboola Tank for constructing a Fire Brigade Station and quarters for the Chief Inspector, Water Works, were so high that they were all rejected and fresh tenders called for, and in response to this second advertisement only one tender from Mr. Sayaji Nagooji for Rs. 42,709 has been received. As this tender also is higher than the total of the office estimate by Rs. 3,248, the Executive Engineer has revised the quantities of some of the items of the work so as to reduce the cost of the work, and the amount of the tender to the total of the office estimate, and the total of the revised quantities, amounts to Rs. 39,461, which is the total of the office estimate.

I, therefore, request the sanction of the Standing Committee to my accepting the tender of Mr. Sayaji Nagooji for Rs. 39,461.

The cost will be met partly out of the 4½ lakhs loan for erecting Fire Brigade quarters in the city and partly out of the grant for the Chief Inspector's quarters.—I have, &c., H. A. ACWORTH, Commissioner.

It was agreed that the consideration of this letter be postponed until the next meeting and that the Commissioner be asked to furnish the Committee with details as to the area and depth of the tank which it is proposed to fill in under the terms of the tender.

BOMBAY, 15*th February* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.S.M.C., *Chairman*.

ABDALLA M. DHARAMSI, Esq., B.A., L.L.B. ; BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M. ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIASHANKAR YAJNIK, Esq. ; K. M. SHROFF, Esq. ; R. G. OXENHAM, Esq., M.A. ; ACCACIO G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., I.C.S., Commissioner ; the DEPUTY EXECUTIVE ENGINEER, Water Works ; and the SECRETARY.

The minutes of the meeting held on the 8th instant, were signed.

Pursuant to the provisions of Section 45 (1) of the City of Bombay Municipal Act, 1888, the Chairman of the Standing Committee determined that the selection by lot of the six members of the Committee, who are retiring on the 1st day of April 1893, should be made at this meeting.

For the purpose of making such selection, two bags were, by order of the Chairman, provided by the Secretary : one bag marked " Members appointed by Government," and the other " Members appointed by the Corporation." In the bag for Government members were placed four cards of equal size, each enclosed in a sealed envelope ; on two of such cards were written the word " remain," and on the other two cards the word " retire." The Government members each drew a card from this bag, and the members who drew the cards containing the word " retire " were the retiring members. In the bag for the Corporation members were placed eight cards of equal size, each enclosed in a sealed envelope ; on four of such last-mentioned cards were written the word " remain," and on the other four cards the word " retire." The Corporation members each drew a card from this bag, and those who drew the cards containing the word " retire " were the retiring members.

As the Hon'ble Mr. Fazulbhoy Visram, appointed by Government, and Mr. Kaikhosro N. Kabraji were absent from the meeting at the time of drawing the lots, the Secretary, by direction of the Chairman, drew the cards which Mr. Fazulbhoy Visram and Mr. Kaikhosro N. Kabraji would have drawn. The Secretary wrote on the cards drawn the names of Mr. Fazulbhoy and Mr. Kabraji, and affixed his own signature below the same.

Every member present signed his name on the card drawn by him under the word " remain " or " retire," and then handed over his card to the Secretary.

12051. After receiving all the cards, the Secretary submitted a list of the six retiring members, which was as follows, and the Chairman announced accordingly that the members who retire are :

Appointed by Government.

Colonel Wilson and Mr. Geary.

Elected by the Corporation.

Mr. Bhalchandra K. Bhatewadedar, Mr. Javerilal U. Yajnik, Mr. Hurkisondas Nurrotamdas, and Mr. Kaikhosro N. Kabraji.

No. 12052. The seal of the Corporation was affixed to deed of contract with Garlick's Indian Patent Stone Company for the supply of two thousand casks of Portland cement.

The seal was also affixed to deed of agreement (in duplicate) between Messrs. Tullockchund Maneckchund, Fakirbhai Premchand, Dayachand Maluckchand, Becharddass Manchand, and Currumchand Premchand, trustees of the property, and the Corporation, securing to the Municipality the right to acquire, at any future time, the set-back of property situated at Parel Road and known as the temple of Shri Godejee Maharaj without payment of any compensation in respect of the unauthorised work, indicated on the plan annexed to the deed, and at the rate of Rs. 50 per square yard for any land shown on the plan scored red, to be there taken up, inclusive of any loss, damage or expense sustained by them by reason of such acquisition.

The seal of the Corporation was also affixed (1) to 13 attested duplicate debentures of the Sanitary Works Loan of 1885, Nos. 1/5 J, 97 N. N., 955 N. N., 959 N. N., 960 N. N., 1997 N. N., 961 N. N., 962 and 1080 N. N., of Rs. 500 each ; (2) to 3 consolidated debentures ditto, Nos. 1588/91 N. N. of Rs. 2,000, 2334/5 N. N. of Rs. 1,000 and 2631/32 N. N. of Rs. 1,000 ; and (3) to 2 consolidated debentures ditto, Nos. 1349/62 of Rs. 7,000 and 1373/78 of Rs. 3,000.

Considered the following :—

THE EXCESSES IN THE ESTIMATES FOR THE TANSA WATER WORKS.

The Sub-Committee appointed by the Standing Committee, on the 14th December 1892, as per margin, beg to report that having, with the assistance of the Commissioner, the Chief Accountant, and the Water Engineer, gone fully into the accounts, they are able to report at length on the whole matter and to recommend the Committee to advise the Corporation to adopt the recommendations herein contained in final settlement of the questions relating to the expenditure on Tansa.

"That a Sub-Committee, consisting of Mr. Abdalla M. Dharamsi, Mr. K. M. Shroff, and Mr. Oxenham, be appointed to report in conjunction with the Commissioner as to how the further excess on the Tansa Water Works of rupees one lakh over the amount of the last estimates sanctioned by the Corporation, on the 12th November 1891, is proposed to be met, and, also, as to how the amounts which are shown as credits against excess items can be adjusted.

No. 9761.

With a view to elucidating the points awaiting the decision of the Corporation, the Sub-Committee consider it desirable to state, as briefly as possible, the outlay which has been already sanctioned.

The original sanctioned estimate for the construction of the works (19th November 1885) for the daily supply of 17,000,000 gallons was Rs. 1,23,00,000, which amount was increased by the Corporation, on the 5th February and 12th November 1891, to

Rs. 1,47,00,000 and Rs. 1,48,50,000, after taking credits for value of reclaimed land at Arthur Road, half value of dead stock and value of mains and special castings not required on the works, amounting on the whole to Rs. 1,44,532.

The additional Rs. 24,00,000 were sanctioned to be raised by loan, whilst the further grant of Rs. 1,50,000 was sanctioned to the debit of the premia received from the sale of the different instalments of the Tansa loan. It should be added that these additional grants were necessary in order to provide for the additional outlay which had to be incurred in putting in deeper foundations for the Dam, the extra rates allowed to the contractors for the construction of the Duct works, the provision of additional mains, the cost of land, the enhanced cost of constructing the aqueduct over the Bassein creeks, the difficulties experienced in carrying the mains under the Kurla Creek, the increased cost of establishment owing to the longer period required for the completion of the work consequent on the extra works just mentioned, and some other minor outlays. The whole of the final revised estimates, including all cost in connection with the bringing in of the Tansa water into Bombay, as now placed before the Standing Committee, amount to Rs. 1,49,40,000, taking the credits for mains, &c., at Rs. 1,44,532 as before, showing a further excess of Rs. 90,000.

Although this appears a very large excess, it must be borne in mind that the Sub-Committee considered it necessary to provide for all liabilities, more especially (1) the items of flooring the Bassein bridge and culverts ; (2) providing screening chamber at Ghatkopar siphon head ; on these two accounts Rs. 25,000 have already been sanctioned by the Corporation under the head of Loan Works for the ensuing year, and consequently the amount of loan to be so raised will be so much less ; (3) the cost of Tansa opening ceremony, Rs. 20,000 (sanctioned to the debit of surplus cash balance or premia) ; (4) Rs. 2,400-10-3, cost of casket presented to His Excellency the Viceroy (temporarily debited to the Commissioner's discretional contingencies) ; (5) Rs. 1,219-7-6, cost of service plate to Mr. W. Clerke (sanctioned to the debit of surplus cash balance).

The aggregate of these items, already sanctioned, is nearly half a lakh of rupees. The balance of the excess, *viz.*, Rs. 40,000, is chiefly due to provision being made for (1) widening the embankments at Bassein Creek, Rs. 10,000 ; (2) excess cost of the sub-way at Chinchpokli under the lines of the G. I. P. Ry., Rs. 11,000 ; (3) the cost of the memorial structure at Tansa, Rs. 2,000. (4) The Sub-Committee have also considered it desirable to make a provision under the head of contingencies of Rs. 11,000, to meet a probable payment to the Duct contractors on account of extra work in Tunnel No. 2. A formal financial provision of Rs. 4,500 has been made to meet any claim which the contractors for laying the 48″ main from Ghatkopar to Bombay may be able to establish on account of bonus.

The Sub-Committee, however, recommend that no payment on these two latter accounts be made without the sanction of the Standing Committee.

In presenting Mr. White's final estimates to the Corporation, the Commissioner showed an excess of Rs. 70,000, and recommended that a round sum of Rs. 30,000 should be added, so that the total additional grant asked for amounted to rupees one lakh, but was exclusive of Rs. 25,000 entered in the Budget for 1893-94, for flooring the Bassein Creek bridge, providing the strainers at Ghatkopar and the cost of the opening ceremony, &c., aggregating about Rs. 50,000 as above referred to. The Sub-Committee, however, requested the Water Engineer to recast the estimates in the light of the latest actuals, and after a most careful scrutiny of the different items of the accounts, the Sub-Committee have been able to reduce the final excess to Rs. 90,000, after including therein all charges connected with the construction and completion of the works.

The Sub-Committee recommend that the final net excess of Rs. 90,000 be met out of the balance of Rs. 93,839-10-6 received as premia on the issue of the Tansa Loan instalment raised prior and up to 1891.

Regarding the question of how the amounts which are shown as credits against the assets are to be met, the Sub-Committee recommend that the total credits of Rs. 1,07,594 for mains, special castings, &c., be temporarily adjusted against the advance of Rs. 2,00,000 sanctioned by the Corporation in their Resolution No. 444, dated 11th April 1892, for the purchase of mains, as the pipes so taken over will be used for the general service of the Water Works Department.

Of the total charges amounting to Rs. 26,532 incurred for filling in the tank at the junction of DeLisle and Arthur Roads for the site of a pipe depôt for Tansa, the Sub-Committee propose that Rs. 6,000 be charged to Tansa Works as rent, and that the balance of Rs. 20,532 be debited to Water Works and Roads, rateably according to the area occupied by each department, to the debit of surplus cash balance. In the same way it is proposed that Rs. 16,406 on account of the present value of stock, at about 50 per cent. of its original cost, consisting of mathematical instruments, pipe-testing machines, cement-testing machine, crane, &c., be temporarily adjusted by debit to the advance of Rs. 2,00,000 above referred to, pending final adjustment to the budget grants for Water Works or other service or sales as the case may be.

A summary of the accounts and the detailed statements attached thereto, showing the revised figures as now settled, are appended hereto.

ABDALLA M. DHARAMSI.
R. G. OXENHAM.
K. M. SHROFF.

14*th February* 1893.

Proposed by Javerilal U. Yajnik, Esq., seconded by Bhalchandra K. Bhatawadekar, Esq.—

"That the report of the Committee appointed on 14th December 1892, to report in conjunction with the Commissioner as to how the further excess on the Tansa Water Works estimates over the amount of the estimates sanctioned by the Corporation on the 12th November 1891 is proposed to be met, be approved, and that the same be forwarded to the Corporation with reference to their resolution No. 9683, dated 8th December last, as the report of the Standing Committee."

No. 12053.

Amendment moved by A. G. Viegas, Esq.—

"That the consideration of the report of the Sub-Committee regarding the excesses on the Tansa estimates be postponed until the next meeting."

Not seconded.

The original motion was *carried* (with one dissentient.)

Resolved : "That the following be placed on the table :—Letter No. 24221, dated 8th instant, from the Commissioner, forwarding, with reference to the resolution of the Standing Committee, No. 11312, dated 1st idem, a statement showing the charges paid out of the grant for the ceremony of opening the Tansa Water Works."

No. 12054.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 24644, dated 14th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structure built without permission :—

Name of Owner.	Where.
Mr. Chunilal Motilal	... Building at Girgam Back Road."

No. 12055.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 24260, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 12056.

Considered letter No. 24543 of 11th instant, from the Commissioner to the Secretary, as under:—

SIR,—With reference to Corporation Resolution No. 7936 of the 27th October last, forwarding letter No. 14461, of 29th September 1892, from the Commissioner to the Standing Committee, with a view to their recommending to the Corporation the source from which the amount of the difference between the forfeit payable by the contractors for non-completion of the new Municipal Offices

within the contract time and the amount payable by the Municipality to the owner of the old building, I have the honour to state that the new Municipal Offices have not yet been entirely completed, and that the architect has not yet reported what parts of the work have been delayed beyond the contract time, and that this question cannot, therefore, be disposed of until I finally hear from him. Pending the settlement of the question as to the liability of the contractors to pay the whole or a portion of rent, &c., charges for last month, I have the honor to request the sanction of the Standing Committee and Corporation to the last month's bill from the Army and Navy Co-operative Society being paid by the Municipality, the amount being met by a transfer as shown in the accompanying transfer statement.—I have, &c., H. A. ACWORTH, Commissioner.

Resolved : "That letter No. 24543, dated 11th instant, from the Commissioner, be forwarded to the Corporation with reference to their resolution No. 7936, dated 27th October last. No. 12057.

"That, subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 2,855 from savings in the Public Health Department Budget, Conservancy Branch, I, superintendence and inspection, to rent of Municipal Offices, to meet excess due to the late Municipal Office building having been occupied for a month more than the period budgetted for, owing to the non-completion of the new building."

Considered letter No. 24513, dated 11th instant, from the Commissioner to the Secretary, as under :—

SIR,—I have the honor to forward a letter from the Executive Engineer on the subject of the entertainment of an architectural surveyor. Mr. Murzban has stated the case in favour of the appointment so strongly that I need say no more than that I fully agree with him, and recommend that the appointment be sanctioned and created on Rs. 200, rising to Rs. 250 per mensem by annual increments of Rs. 10. The only doubt I have is whether the salary is sufficient, but on this point Mr. Murzban is a better judge than I can be.—I have, &c., H. A. ACWORTH, Commissioner.

No. $\frac{G}{4199}$ OF 1892-93.

BOMBAY, 8*th February* 1893.

TO THE MUNICIPAL COMMISSIONER.

SIR,—I have the honour to state that for the proper and systematic supervision of the new buildings now in progress, and for looking after the handsome buildings now occupied by the Municipal Offices, the services of a special surveyor are, in my opinion, necessary.

2. The following buildings and other works are at present in progress :—(1) Market at Foras Road ; (2) New Mutton Market in the Arthur Crawford Markets ; (3) Fire Brigade Station in the Fort ; (4) Fire Brigade Station at Pedder Road ; (5) Fire Brigade Station at DeLisle Road ; (6) Fire Brigade Station at Mahim Gardens ; (7) Preparing ground for the Fire Brigade Station at Sankli Tank.

3. The following works have been sanctioned and are proposed to be started shortly :—(1) Fire Brigade Station at Bhuleshwar ; (2) Filling in Municipal ground and building a retaining wall at Walkeshwar Road ; (3) Filling in the Baboola Tank ; (4) Road over the Tansa pipe from Dadar to Matunga.

4. The following are the works which have been sanctioned, but for which tenders are still to be invited :—(1) Fire Brigade Station at Dadar ; (2) Fire Brigade Station at Sankli Tank to contain about 11 blocks of buildings ; (3) Fire Brigade Station at Babula Tank to contain about 7 blocks of buildings ; (4) Fire Brigade Station at Gamdevi ; (5) Fire Brigade Station at Chinchpoogly ; (6) Fire Brigade Station at Colaba Markets comprising about five buildings.

5. The following are the works for which plans and estimates have been submitted for sanction :—(1) Health Department Stables in F & G Wards ; (2) Health Department and Market Bigaries' chal at Boree Bunder ; (3) Milch Cattle Stables at Mody Bay ; (4) Wadi Bander over-bridge ; (5) Health Department stables in E Ward.

6. In addition to these, the new market and school at Bhuleshwar, estimated to cost about Rs. 1,67,000, will soon be sanctioned by the Corporation.

7. The new works in progress are at present all superintended by the Chief Surveyor. They lie in different parts of the City, and it is not therefore possible for him to look after them efficiently, and in addition to attend the office for preparing projects, which he is under the existing arrangements required to do.

8. The following projects are yet to be prepared :—

(1) Stables for bullocks and huts for cart drivers, &c., at the Bandora Slaughter House ; (2) Stables in the Victoria Gardens ; (3) Estimate for removing and replacing fence in the Victoria Gardens ; (4) Incinerator for burning town refuse ; (5) Designs for a fernery in Victoria Gardens ; (6) Preparing a correct survey plan of the Victoria Gardens ; (7) Survey of land in Agripada District for the construction of roads ; and (8) several other projects of minor importance.

9. For these reasons it seems to me that there should be a competent architectural surveyor to look after all architectural works and ordinary buildings, already constructed and those in progress, and also those that are shortly to be commenced. This surveyor should, in my opinion, be a good draftsman capable of preparing drawings and details of architectural works, and one who has had practical experience of the execution of such works, for, I think, it

would be a pity to entrust the maintenance of such architectural works as the new Municipal Offices, the proposed market and school at Bhuleshwar, and other similar buildings which will be constructed in future, to ordinary inspectors and surveyors who have not had training in architecture and are not qualified to superintend them.

10. If an architectural surveyor were employed, the Chief Surveyor will be able to devote his whole time and attention to the preparation of plans and estimates of new roads and other engineering works, the checking of measurements and accounts of works in progress, which under the present system is imperfectly done, and to make himself generally useful for other out-door and office works. I may observe that the Corporation have expressed a desire that the new roads in Agripada should be taken in hand and completed as soon as possible, and it is my intention to employ the Head Surveyor on this duty, if he can be relieved of some portion of the office work on which he is now engaged. I am confident that the measure I propose will effect much economy in expenditure and efficiency in the execution of works.

11. In the event of the proposal being sanctioned, it would be possible to dispense with the services of two temporary Inspectors whose salaries are charged to works, which course would save the Municipality about 200 a month.

12. I do not think it would be possible to secure the services of a competent architectural surveyor, such as that abovementioned for less than Rs. 200 or 250 per month, and if you concur with me in the necessity of employing a qualified architectural surveyor, I would respectfully suggest that the sanction of the Corporation may be obtained at an early a date as possible to that apppointment on a salary of Rs. 200 per mensem (including travel ling allowance) rising to Rs. 250 by annual increment of Rs. 10 a month.—I have, &c., M. C. MURZBAN, Executive Engineer, Municipality.

Proposed by Abdalla M. Dharamsi, Esq., seconded by Javerilal U. Yajnik, Esq.—

"That letter from the Commissioner, No. 24513, and the accompaniment thereto, be forwarded to the Corporation with the recommendation that sanction be given to the appointment of an architectural surveyor on Rs. 200 per mensem, rising by annual increments of Rs. 10 to 250 per mensem.

No. 12058.

"The salary of such appointment for the current year to be met out of surplus cash balance."

Amendment moved by A. G. Viegas, Esq., seconded by Bhalchandra Krishna Bhatwadekar, Esq.—

"That the application made by the Executive Engineer for the entertainment of the services of an architectural sur-

veyor be referred back to the Commissioner for favour of enquiry as to whether it will not be sufficient to employ such officer temporarily, merely."

The amendment was *lost*, the votes being 3 *for* and 6 *against*. The original motion was *carried* by six votes *against* three.

Resolved: "That, as applied for by the Commissioner, in his letter No. 23308, dated 27th January 1893, sanction be given to the payments of (Rs. 15-12-3) actual travelling expenses incurred by clerks of the different departments of the Municipality on the 14th and 15th idem, who were sent in charge of the records during their removal from the old office to the new one. That sanction be also given to the payment of (Rs. 52-14-0) to meet the allowance of annas four a day each to the peons who were sent in charge of furniture during such removal. The cost to be debited to the contingent grants of the various offices."

No. 12059.

Resolved: "That, as applied for by the Commissioner, in his letter No. 24263, dated 8th instant, sanction be given to the acceptance by him of the tender of Mr. Sayaji Nagooji, amounting to Rs. 39,461, for the work of filling in a portion of the Babula Tank for constructing thereon a Fire Brigade Station and quarters for the Chief Inspector.

No. 12060.

"That letter No. 24639, dated 13th instant, from the Commissioner, reporting that the area to be reclaimed is 3,286 square yards, and the average depth of filling in is 26 feet, be *recorded*."

Read letter No. 24640, dated 13th instant, from the Commissioner, to the Secretary, as under:—

SIR,—The tender of Messrs. Vishnu Narsingrao & Co., for the supply of road-metal during the year 1893-94, at Rs. 6 per brass of 100 cubic feet, was accepted by the Standing Committee on the 11th ultimo (Resolution No. 10498), and on the same day the Executive Engineer was requested to ask the contractors to pay the further deposit required to be paid under the terms of the tender, and to execute the contract within fifteen days from the date of the intimation to them of the acceptance of their tender.

This intimation was given to them by the Executive Engineer on the 17th idem, but instead of paying the further deposit of Rs. 4,000 within the time which expired on the 1st instant, they wrote to me a letter on the 31st ultimo, wherein they state that, as one Sambhu Maluji, who was one of the unsuccessful tenderers, has

monopolized the purchase of road metal from the quarry-owners they are unable to carry out the work for which their tender has been accepted, and offer to supply road-metal on the following conditions, *viz.* :—

That they should be allowed to supply 500 brass of metal per month instead of 125 brass per diem as originally stipulated for, and that they should be allowed to supply metal in large and small pieces and of no particular specification or size.

They further state that if this offer is not accepted, they cannot fulfil the contract.

From enquiries made by the Executive Engineer it appears that the contractors' statement is correct, but he does not on that account recommend the acceptance of the terms on which they now offer to do the work, because a much larger quantity of metal is required per month than that which they now offer to supply, and because we cannot undertake to accept any size of metal which they may choose to give. It seems to me that if they had sufficient capital and other resources at their command, and if they were energetic and persevering, they could have successfully broken the monopoly by opening new quarries. But as they have failed to do this, and to carry out the terms on which they tendered to supply metal, they should forfeit the sum of Rs. 1,000 deposited by them with the tender in accordance with the terms thereof. As the present contract expires on the 28th instant, and as there is no likelihood of our receiving favourable rates under the circumstances mentioned above, even if fresh tenders were called for, the next higher tenderers, *viz.*, Messrs. Byramji Jehangir & Co. and Messrs. Amruta Babaji, Vachaghandi Bhedwar & Co., who had tendered originally to supply road-metal at the respective rates of Rs. 6-2-0 and Rs. 6-5-0 per brass, were asked whether they would undertake it, but Messrs. Byramji Jehangir & Co. declined to do so. Messrs. Amruta Babaji, Vachaghandi Bhedwar & Co. offer to supply metal at Rs. 6-8-0 per brass, and stipulate that they will supply from 1,000 to 1,200 brass per month only, but will do their best to supply more than the quantity above referred to. But as this rate appeared to be rather high, they were asked to reduce it, and enquiries were at the same time made of other contractors as to whether they would undertake the work. On reconsideration Messrs. Amruta Babaji, Vachaghandi, Bhedwar & Co. reduced it to Rs. 6-6-0 and subsequently to Rs. 6-5-0 per brass, the rate in their original tender.

In reply to the enquiries made of the other contractors, one Mr. Hormasji Jehangir offers to supply metal at Rs. 6-4-0 per brass, and agrees to supply 100 brass per day and to deposit Rs. 5,000, the full amount of security for the due fulfilment of his contract, and I therefore submit his tender for the consideration of the Standing Committee. In connection with this subject I may state that it would perhaps be advisable for the Municipality to open their own quarries, but the preliminaries for acquiring

ground, purchasing tools, securing men to work the quarries and other details would require considerable time, and as the present contract expires on the 28th instant there is no other alternative but to let the work by contract.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 12061. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 24640, dated 13th instant, sanction be given to the acceptance, by him, of the tender of Mr. Hormusji Jehangir for the supply of road metal during 1893-94, at Rs. 6-4-0 per brass, on condition that he furnishes 100 brass per day if required to do so, and deposits Rs. 5,000, the full amount of security, for the due fulfilment of his contract."

No. 12062. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 24482, dated 11th instant, sanction be given to the transfer of Rs. 264 from savings in the Health Department Budget, conservancy branch, 7, rent, extra stable accommodation for A and B wards, to same department, same head, rent of ground at Mahim stable owing to no provision having been made for this charge in the current year's budget."

No. 12063. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 24501, dated 11th instant, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Sheik Ahmed Fakrudin for the recovery of Rs. 33-13-10, being the amount of property taxes due in respect of property No. 3673 (B ward) for the 1st and 2nd halves of the current year."

Considered letter No. 24614, dated 13th instant, from the Commissioner, to the Secretary, as under :—

SIR,—With reference to the latter part of my letter No. 18052 of 21st November last, I have the honor to say that it is not possible to establish by records when the mains in question were laid down. Under the uncertainty of the case I have therefore asked the Agent, B. B. & C. I. Railway, whether he would consent to let the question be settled by dividing the charge Rs. 2,500 between the Railway and the Municipality, and he has answered in the affirmative. I beg to suggest that the Corporation should sanction this arrangement, which strikes me as being, under the circumstances, fair to both sides.—I have, &c., H. A. ACWORTH, Commissioner.

No. 12064. *Resolved :* "That letter No. 24614, dated 13th instant, from the Commissioner, be forwarded to the Corporation, with reference to the Committee's

resolution No. 9501, dated 7th December 1892, with the recommendation that sanction be given to the cost, Rs. 2,500, of shifting and relaying the water mains in connection with the construction of the Falkland over-bridge, being equally divided between the B. B. & C. I. Railway Company and the Municipality, as agreed to by the Company.

"The Rs. 1,250 to be contributed by the Corporation to be paid from surplus cash balance."

Resolved : "That Dr. D. A. D'Monte be referred, with reference to his letter of 29th November 1892, No. 12065. to the proceedings of the Standing Committee of the 8th instant, from which it will be seen that the Commissioner considers it impracticable to provide for the purchase of sandstone outside the Island of Bombay, but that, under the new contract just entered into, the contractors for such material are required to fill in with other material the spaces from which the sandstone will be excavated."

Read letter No. 23907, dated 2nd instant, from the Commissioner, to the Secretary, as under :—

SIR,—Referring to the Resolution of the Standing Committee, No. 8067, dated the 2nd November last, I have the honour to forward the accompanying correspondence, from which it will be seen that Mr. Ratnagar has made some modifications in his original apparatus as regards materials of which it is to be constructed. I concur with the Executive Engineer and the Health Officer that while the "Safety Device" will be useful in saving life in case of accident, it is doubtful whether it will prevent a determined suicide from effecting his purpose, but probably this may be said of any similar device.

2. The estimated cost of making these safety devices to suit wells of different inside dimensions from 15′ to 30′ is given in the concluding para. of the Executive Engineer's No. $\frac{G}{3259}$, dated the 25th November last.

3. Provision for the maintenance of the safety devices will have to be annually made, if they are sanctioned by the Corporation to be adopted.

4. The accompanying plan, showing the positions and inside dimensions, both of the circular and of the rectangular wells, near the Elphinstone High School and the new Municipal Building, is hereto annexed.

5. Mr. Ratnagar's invention strikes me as being somewhat complicated, and it involves an element of danger. The netting might be broken through by a fall and then prevent the person from rising to the surface.

6. I enclose a model of another invention which seems likely to be more effective, while it will be a good deal cheaper and per-

fectly safe. It is a circular disc of wood with eight arms or spokes inserted, like the spokes of a wheel. It will float on the surface of the water and can be moved round, or a spoke or spokes taken out if they interfere with the use of a Persian wheel or bucket. The inventor is Mr. C. H. Byrne, a member of the Corporation and a well-known swimmer, who holds the Humane Society Medal for saving the life of a woman who had jumped into a well. I think the device very worthy of attention, and I can easily have it tried. It will last, once made, for a number of years and cost very little to construct.—I have, &c., H. A. ACWORTH, Commissioner.

BOMBAY, *2nd November* 1892.

To THE COMMISSIONER.

SIR,—With reference to our interview *re* my invention for life-saving device for wells, I beg to send in the following working details, with a rough estimate for applying the apparatus to a well, say, 30 feet in diameter.

Referring to the model submitted, the hoop is to be 29 feet in diameter, preferably of selected gas pipe $1\frac{3}{4}$″ inside diameter and weighing about 390 lbs. The net will be of 1″ rope with 6″ mesh, about 3,300 feet long and about 99 lbs. in weight ; six outer floats, cylindrical, 4 ft. long and 2 ft. 3 in. in diameter of $\frac{1}{16}$″ plate with screw plug.

One central float, cheese-shaped, 3 ft. 3 in. diameter and 1 foot deep, of $\frac{1}{16}$″ plate with screw plug.

Middle float to have six eyes in lower edge to attach the net ; net to be of tarred rope well pitched when in place. Floats to be painted red with three coats.

According to the estimate as given by one of the local engineering firms, the cost of the whole apparatus will come to about Rs. 400 to 500, but I believe the hoop and the floats can be made cheaper at the Municipal Workshops, the net being supplied by me at the rate of Rs. 2-4 per square yard.—I have, &c.,

SORABJI M. RATNAGAR.

No. 17107 OF 1892-93.

8th November 1892.

Forwarded to the Executive Engineer for favour of report.

H. A. ACWORTH,
Commissioner.

No. 12066. *Resolved :* "That the following report be approved :—

"*REPORT OF THE STANDING COMMITTEE ON EXPERIMENTAL LIFE-PRESERVING APPARATUS FOR WELLS AND TANKS.*

"In reporting on the Corporation's Resolution No. 7930, dated 27th October 1892, the Standing Committee beg to forward the Commissioner's letter No. 23907, dated 2nd instant, the accompaniments thereto, and model furnished

by Mr. Byrne, and at the same time to express the opinion that Mr. Sorabjee M. Ratnagar's invention would not only be very costly when applied to the public tanks and wells, but would probably be of very doubtful efficacy, both on account of the liability of the materials of which it is made to become rapidly decayed by the action of water, and of the danger there would be of a drowning person becoming hopelessly entangled in the meshes of the net.

"On the other hand, the apparatus submitted by Mr. Byrne is extremely simple, the materials of which it would be made being much more durable than netting; and while it is free from the objection of being liable to entangle a swimmer, it would be easily laid hold of and would afford ready help to a drowning person. The Executive Engineer estimates that one of Mr. Byrne's 'Safety Devices' 20 feet in diameter and consisting of a wooden disc 3′ in diameter with 8 spokes each 8′ long by 3″ broad and 2″ in thickness would cost Rs. 23-10-0 only."

Resolved: "That the Progress Report, up to the end of December 1892, of new works in course of construction, be laid on the table, and brought on for consideration next week." No. 12067.

Resolved: "That the following be forwarded to the Commissioner for favour of remarks, and that the applicants be informed accordingly:—Memorandum from the Municipal Secretary, forwarding petition, dated 13th instant, addressed to the Corporation by Dr. Shamsuddin Sullemanjee and others, regarding the condition of Morland Road." No. 12068.

The following return was read and *recorded*:—

Return of fires at Hornby Road (Municipal Hall), Curry Road (Parel), Kamathipura 11th Street, and Madanpura, forwarded with the Commissioner's memorandum No. 24078, dated 6th February 1893.* No. 12069.

The following statement† was laid on the table:—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 12th February 1893.

* *See* Appendix C. † *See* Appendix B.

BOMBAY, *22nd February* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman.*

ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA K. BHATWADEKAR, Esq., L.M.; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON.

H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 15th instant, were signed.

No. 12485. The seal of the Corporation was affixed to deeds of contract (1) with Messrs. Mistri, Bhedwar & Co., for the erection of metal ventilating shafts in Ripon Road ; (2) with Messrs. Rustomjee Pestonjee Master & Co., for the supply of iron castings during the year 1893-94 ; (3) with Messrs. Killick, Nixon & Co., for the supply of 300 tons of Davison's West Hartley coal ; (4) with ditto for the supply of 1,000 tons of ditto ; (5) with Maistri Gopal Govind, for reconstructing the masonry pillars in the outlet well at Tansa Lake ; (6) to counterpart of lease with the Secretary of State for India in Council of 120$\frac{5}{9}$ square yards of Government ground on the Kennedy Sea Face Garden for the erection of public latrines ; and (6) to deed of contract with Messrs. Bhojabhoy Allarukhia & Co. for the supply of grain, &c., during 1893.

No. 12486. *Resolved* : "That, as applied for by the Commissioner, in his memoranda Nos. 24745 and 25121, dated 15th and 20th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Name of Owner.		Where.
Mr. Vazir Saboodin	...	Building at Dadar Road.
„ Shivlingu Gungaji	...	No. 12, Kamathipura 1st Street."

No. 12487. *Resolved* : "That, as applied for by the Commissioner, in his memorandum No. 25357, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 12488. *Resolved* : "That, with reference to their resolution No. 2256, dated 13th June 1892, the Corporation be recommended (1) to sanction the payment of Rs. 75 to Mr. G. F. Horbury for three extra

visits to Love Grove Pumping Station which he was called upon to make owing to the sudden break-down of the pumps; (2) to authorise further payments at this rate to Mr. Horbury should he be required to make any extra visits during the course of the current month. The cost to be met from savings in the grant for salary of the Superintendent of Workshops."

No. 12489. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 25049, dated 18th instant, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 712-9-0 from savings in the grant for the Public Health Department, conservancy branch, I, superintendence and inspection, to general office establishment, section II, printing Voters' list, to meet excess on the grant for printing the list."

No. 12490. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 24779, dated 15th instant, sanction be given to an advance of Rs. 250 to Mr. Gopal Govind, contractor, for erecting pillars in the outlet well at Tansa on the security of the value (about Rs. 350) of his materials already on the ground. The amount to be recovered from his bills under the contract."

No. 12491. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 25009, dated 17th instant, sanction be given, under section 92 (*b*) of the Municipal Act, to the sale of the materials of the six temporary sheds for sweepers in Kharsedji Suklajee Street to Messrs. Isoofali Ismailji, Bala Bhowdin, Lookmanji Noorbhoy, Amirji Jafferji, and Noorbhoy Kadibhoy, for Rs. 1,200, the highest bidders at the auction sale."

No. 12492. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 25006, dated 17th instant, sanction be given, under the terms of section 69 (*c*) of the Municipal Act, to a variation of Messrs. Littlewood & Co.'s contract for the supply of earth and blue trap-stone for making up portion of Gibbs Road, whereby the contract time for the work may be extended until the 10th proximo; as consequent on the building of the retaining wall, the contractors were not allowed by the Acting Executive Engineer to commence work until 6th ultimo."

Read letter No. 25365, dated this day, from the Commissioner to the Secretary, as under :—

SIR,—I have the honor to request that, out of the establishment sanctioned in the loan works budget for 1893-94, a portion may be granted to Mr. Smith from 1st March to enable him to carry on the work of preparing plans and estimates for portions of the city, for the drainage and sewerage of which either no estimates have been taken out or they require revision. Until sewerage works are actually undertaken, no out-door establishment will be required.

1 Surveyor on Rs. 125 ; 1 do. Rs. 100 ; 2 do. Rs. 80, Rs. 160 ; 2 do. Rs. 75, Rs. 150 ; 1 do. Rs. 70 ; 1 do. Rs 60 ; 4 Draftsmen on Rs. 40, Rs. 160 ; 1 Head Clerk and Accountant, Rs. 100 ; 1 Accounts Clerk, Rs. 50 ; 1 Correspondence Clerk, Rs. 45 ; 1 Registering Clerk, Rs. 30 ; 1 Copying Clerk, Rs. 30 ; 1 do. Rs. 25 ; 16 Lascars on Rs. 10, Rs. 160 ; 1 Havildar Rs. 13 ; 3 peons on Rs. 10, Rs. 30 ; 3 do. Rs. 8, Rs. 24.

The whole of the above establishment is provided for and passed in the Budget, except the Head Clerk and Accountant, and the difference Rs. 25 between the pay, Rs. 100, provided for him and that Rs. 75, passed in the Budget is much more than made up by employing only 4 Draftsmen on Rs. 160 instead of 5 on Rs. 230 and 16 lascars on Rs. 160 instead of 18 on Rs. 180. The havildar is also an innovation, which is more than covered by proposing only 6 peons on Rs. 54 instead of 9 on Rs. 87. The out-door establishment and the Audit Clerks will not be required till works are actually begun, but the office itself will not be complete without an Accounts Clerk though I shall take care he is not entertained until the necessity for his employment is established. But as I have given Mr. Smith no Record Clerk and only one Correspondence Clerk, the Accounts Clerk could not well be spared even there were no pay-sheets to be attended to. Mr. Smith's work is at present being carried on without any office of his own and only with such temporary assistance as Mr. Murzban can give him, and it is essential that these proposals should be laid before the Corporation next month and passed as early as possible.—I have, &c.,

H. A. ACWORTH, Commissioner.

Resolved :- "That letter No. 25365, dated this day, from the Commissioner, be forwarded to the Corporation with the recommendation that the alterations in the Budget grant for 1893-94 for loan works establishment (drainage), now proposed, be sanctioned, and that, for the present, the establishment for the Drainage Engineer on special duty be sanctioned as follows :—

No. 12493.

1 Surveyor on Rs. 125 ; 1 Surveyor on Rs. 100 ; 2 do. Rs. 80 each, Rs. 160 ; 2 Surveyors on Rs. 75, Rs. 150 ; 1 Surveyor on Rs. 70 ; 1 Surveyor on Rs. 60 ; 4 Draftsmen on Rs. 40 each, Rs. 160 ; 1 Head Clerk and Accountant, Rs. 100 ; 1 Accounts Clerk, Rs. 50 ; 1 Correspondence Clerk, Rs. 45 ; 1 Registering Clerk, Rs. 30 ; 1 Copying Clerk, Rs. 30 ; 1 Copying Clerk, Rs. 25 ; 16 Lascars on Rs. 10 each, Rs. 160 ; 1 Havildar, Rs. 13 ; 3 Peons on Rs. 10 each, Rs. 30 ; 3 Peons on Rs. 8, Rs. 24. Per mensem Rs. 1,332."

Resolved : " That the following be circulated and brought on for consideration next week :—Letter No. 25178, dated 20th instant, from the Commissioner, forwarding a statement of irrecoverable bills and requesting sanction, under section 216 of the Municipal Act, to write off the amount, *viz.*, Rs. 1,261-4-7, for the reasons given against each case."

No. 12494.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 25305, dated this day, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to excesses, aggregating Rs. 3,210-9-6, over the grants for water supply, public gardens, garden on the Flats, section III, (*b*), conservancy branch, section 8, (*c*), markets and slaughter-houses, section 11 and (*d*), cemeteries, section 7, being met by transfers from savings in the grant for water supply, maintenance of public gardens, A, Victoria Gardens, section V.-A."

No. 12495.

Resolved : " That, as applied for by the Commissioner, in his memoranda Nos. 25363 and 25364, dated this day, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 3,500 from savings on the grant for commission to the Port Trust for collecting Town Duties and from savings in the grant for superintendence and inspection, conservancy branch, section I, Public Health Department, to meet excesses of Rs. 2,500 and Rs. 1,000 respectively, due to the G. I. P. Railway and the B. B. & C. I. Railway Companies for collecting Town Duties ; such excesses being consequent on the enhanced duties collected by the Companies."

No. 12496.

Resolved : " That the following be *recorded* :—Letter No. 25086, dated 18th instant, from the Commissioner, reporting that he has leased to one Bisasur Bindraban 17,000 square yards of reclaimed ground at Tardeo between Arthur and Clerk Roads (about 400 yards from the Railway Line) for the purpose of stacking hay for one year from 29th December 1892, on payment of Rs. 4,000, to be paid in four instalments, and on the terms stated in the said letter."

No. 12497.

Resolved : " That, as applied for by the Commissioner, in his letter No. 24830, dated 15th instant, sanction be given to Mr. Vasantrao Moroba, clerk, Water Works Department, being allowed to join the

No. 12498

Municipal Pension Fund from 1st November 1892, he having furnished the requisite medical certificate."

No. 12499. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 24986, dated 17th instant, sanction be given to Purshotum Nasha, an oilman at the Love Grove Pumping Station, being allowed his full pay Rs. 15 a month while under treatment at the hospital for injury to his right arm, caused by it being jammed between the eccentric strap and the floor-plate, Love Grove Pumping Station, on the 20th ultimo.

"That, during his absence, a substitute be employed on Rs. 15 per mensem to the debit of the grant for stores, &c., for the station."

No. 12500. *Resolved*: "That the consideration of the following be postponed till next week :—Letter No. 24950, dated 16th instant, from the Commissioner, forwarding, for the approval of the Committee and the Corporation, under section 288 of the Act, copy of a draft agreement, which it is proposed to be entered into with the Kurla Municipality for a period of five years for the supply of water within their Municipal limits.

"Letter No. 153, dated 14th instant, from the President, Kurla Municipality, forwarding a petition and requesting that a lower rate may be fixed for water to dipping wells in Kurla for free supply to the public."

Proposed by R. G. Oxenham, Esq., seconded by A. G. Viegas, Esq.—

No. 12501. "That, in the opinion of the Standing Committee, 4 annas per square yard is the fair market rate for the 149 square yards, or thereabout, of ground occupied by the Bombay Municipality as the site of their former kutchra-siding of the Railway line at Kurla on the east of the line, the land being required by the Railway Company for the improvement of the station at Kurla."

Carried.

Read memorandum No. 31377, dated 13th February 1893, as follows :—

MEMORANDUM.—The principle adopted has been this—to use those disinfectants which are most stable and most likely to give certain results. In dealing with agents which are to have any effect on the public health, we can only use those which we know to give certain results under all conditions. The public health is too important a matter to be made a subject of experiments unless that the results of

experiments could be fairly gauged. For instance, some years ago we used carbolic acid powder made in Bombay, and the result was most disappointing. In a city, such as Bombay, analysis of the disinfecting agents is of no value practically for the simple reason that, if the analysis shows the disinfecting powder to be of bad quality, other disinfecting powder cannot be obtained at the time. Hence the necessity for using disinfectants which are known to give constant results. This is why we have always used Calvert's preparations which never vary.

When, for instance, we find two articles like phenyle and cresol practically the same, we use the cheaper. I should recommend doing exactly the same in the case of carbolic acid powder if we were sure that the powder of any other manufacturer would give as certain results as Calvert's. I believe it is considered that Calvert's preparations are about the most certain of all disinfecting preparations in the market.—T. S. WEIR, Health Officer.

No. 24822 OF 15*th February* 1893.

Copy forwarded to the Municipal Secretary with reference to the latter portion of the Standing Committee's Resolution No. 9489 of 7th December last.—H. A. ACWORTH, Commissioner.

Proposed by A. G. Viegas, Esq., seconded by Bhalchandra K. Bhatwadekar, Esq.—

No. 12502. "That, with reference to the Health Officer's Report, No. 31377, dated 13th instant, the Commissioner be requested to provide for the analyses of samples purchased in the bazaar of Calvert's, Fletcher's, McDougal's and Jayes' carbolic powder."

Carried.

Read the following :—

No. 4231-G OF 1892-93.

BOMBAY, 11*th February* 1893.

TO THE COMMISSIONER.

SIR,—I have the honor to state that the sum formerly estimated by this department for the proposed trough was Rs. 725. The probable cost of putting up the trough according to the several suggestions now made by Mr. Tomlinson would be Rs. 1,132.

2. The site selected for the location of the trough is a prominent and valuable one, being situated at the junction of two important thoroughfares, *viz.*, the Hornby and Paltan Roads, and is in my humble opinion entirely unsuited for the erection of a common trough.

3. The site is suitable for a statue or a handsome fountain to which might be attached troughs for watering cattle and it seems to me that rather than disfigure the site by the erection of such a trough as that proposed by Mr. Naidoo, it would be well to let it remain vacant until an offer for a better utilization of the site is received.

4. One of Mr. Saisha R. Naidoo's objects in offering to put up the trough appears to be to perpetuate the memory of a relative of his.

5. The sum of Rs. 1,000, which Mr. Saisha proposes to give in charity for this purpose, is too insignificant for the fulfilment of such an object, and I am therefore respectfully of opinion that Mr. Saisha Naidoo should be informed that unless he is prepared to spend a much larger sum and put up a small handsome fountain with watering troughs, his proposal cannot be accepted.

6. It appears to me that if it were made publicly known that the Municipality are prepared to consider offers for the erection of a fountain at this site some public-spirited person would come forward to make a gift of it to the Municipality.—I have, &c., M. C. MURZBAN, Executive Engineer, Municipality.

No. 24821 OF 15*th February* 1893.

Copy forwarded to the Municipal Secretary, with reference to the Standing Committee's Resolution No. 5499 of 24th August 1892. The Commissioner is disposed to agree with the Executive Engineer particularly if his last conjecture is correct.—H. A. ACWORTH, Commissioner.

No. 12503. *Resolved*: "That the consideration of memorandum No. 24821, dated 15th instant, from the Commissioner, and its accompaniment, be postponed until after the Commissioner has ascertained whether Mr. Shaisha R. Naidoo is prepared to expend such a sum of money as would provide adequately for the erection of a handsome fountain at the junction of Hornby and Paltan Roads."

No. 12504. *Resolved*: "That the following be *recorded*:—Memoranda Nos. 24803 and 24804, dated 15th instant, from the Commissioner, reporting, with reference to the resolutions of the Committee, Nos. 4484 and 5620, dated 3rd October 1888 and 9th January 1889, the following transfers:—(1) of Rs. 50,000 from the 35 Lakhs various Sanitary Works Loan Deposit Account to the Municipal General Fund Pass Book on 8th instant; and (2) of Rs. 2,05,000 from the Municipal Building Fund Loan Deposit Account to the Surplus Cash Deposit Account 5 per cent. Municipal Debentures on the 9th idem."*

* The Chief Accountant reports that the balance remaining to the credit of the above accounts after effecting the above transfers are as under:—

(1)	In 4 % Government paper for Rs. 11,54,100...	...	Rs.	11,89,929	4 0
	„ Cash	...	„	43,835	1 9
			Rs.	12,33,764	5 9
(2)	In 5 % Municipal Debentures for Rs. 3,45,000	...	Rs.	3,45,000	0 0
	„ Cash	...	„	13,732	12 0
			Rs.	3,58,732	12 0

Resolved : "That the following be *recorded* :—Memo-
No. 12505. randum No. 25041, dated 18th instant, from the Commissioner, reporting that no house or portion of any house fell during the month of January 1893."

Considered the Progress Reports, up to the end of December 1892, of new works now in course of construction.*

Resolved : "That the Progress Report of new works
No. 12506. in course of construction up to the end of December 1892 be *recorded*."

Proposed by Cowasjee Hormusjee, Esq., seconded by Javerilal U. Yajnik, Esq.—

"That, with reference to the resolution of the Corpora-
No. 12507. tion No. 12253, dated 16th instant, sanction be given to a monthly pension of Rs. 166-10-1 being paid to Mr. W. C. Rowe, late Superintendent of the Municipal Workshops, from the 11th February 1892, the date of his retirement from the Municipal service.

"That the Corporation be recommended to sanction the payment of Rs. 4,106-3-11 from surplus cash balance to meet the amount of Mr. Rowe's pension from 11th February 1892 to 28th February 1894."

Carried.

The following return was read and *recorded* :—

Return of fires at DeLisle Road, Nagdevi Street, Supari
No. 12508. Bag Road, Colaba Road, Old Race Course (Mahalakshmi), DeLisle Road and Girgam Back Road (Dhobie Talao), forwarded with the Commissioner's memorandum No. 25119, dated 20th February 1893.†

The following statement ‡ was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 19th February 1893.

Resolved : "That, as applied for by the Commissioner,
No. 12509. in his memorandum No. 25242, dated 21st instant, sanction be given to the transfer of Rs. 50 from savings in the grant for painting, &c., Elphinstone Circle Garden, section III, A, to same head, same section, repairs to buildings, to meet excess on the latter head."

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* *See* Appendix D. † *See* Appendix C. ‡ *See* Appendix B.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 25306, dated 22nd instant, sanction be given to the transfer of Rs. 331-7-10 from savings in the grant for Executive Engineer's (drainage) Department, section 4, contingencies and stores, B, maintenance of Love Grove Pumping Station, to same department, section I, establishment, B, maintenance of the station, to meet excess on the latter head, consequent on the employment of additional drivers and firemen for the two centrifugal pumps during the break-down of engines Nos. 3 and 4." No. 12510.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 25300, dated 21st instant, sanction be given to the transfer of Rs. 11-12-0 from savings in the grant for Elphinstone Circle Garden, section II, stores and petty charges, to section III, C, garden implements, hoses, &c., to meet excess on the latter head consequent on it being necessary to replace old worn-out hose by new hose." No. 12511.

Read letter No. 25310, dated this day, from the Commissioner to the Secretary, as under :—

SIR,—With a view to meet the cost of renewing the existing worn-out mains and to establish a fund for such renewals, provision of Rupees one lakh was made in the Water Works Budget for the current year and a similar provision has been sanctioned by the Coporation in the Budget for the ensuing year, and Rupees one lakh will be annually set aside for the purpose as already pointed out in the memorandum attached to the Water Works Budget for the current year (page 43).

Out of the grant for the current year, no expenditure has been incurred up to date and there does not appear any probability of any liability being incurred before the end of the year.

Under the circumstances, I have the honor to request the Standing Committee to recommend the Corporation to sanction at an early date the investment of the abovementioned sum at par in 5 per cent. Municipal Debentures of the Tansa Loan, which at present form part of our invested surplus balance, so that the necessary adjustment may be made before the 31st March next.

I also request the sanction of the Corporation to the balances of the annual provision being similarly invested every year.

Similar arrangement was sanctioned by the Corporation in their resolution No. 5294, dated 19th November 1888, in regard to investments of the Sinking Fund and the Municipal buildings fire insurance fund.—I have, &c., H. A. ACWORTH, Commissioner.

Resolved : " That letter No. 25310, dated this day, from the Commissioner, be forwarded to the Corporation with a recommendation that sanction be given to the investment of Rs. 1,00,000 provided in the Budget for the current year for renewing the existing worn-out water mains in 5 per cent. Municipal Tansa bonds at par value before the issue of such bonds to the public. No. 12512.

" That the Corporation be further recommended to sanction the investment every year of the balances, if any, of such annual provision in available Municipal bonds of any sanctioned loan at par value."

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 25362, dated this day, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 1,400 from savings in the grant for Pawai Works, to same head, section III, (*a*) contingencies, (*b*) advertisements, &c., (*c*) printing, to meet excess on the latter heads." No. 12513.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 25376, dated this day, sanction be given to the transfer of Rs. 150 from savings in the grant for (drainage) section II, establishment and labour, A, miscellaneous drainage, to same branch, section II, carts, &c., A, to meet excess on the latter head, due to additional carts and bullocks having been engaged during the fair weather for the more efficient flushing and cleaning of drains, gutters and main sewers." No. 12514.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 25375, dated this day, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 2,000 from savings in the grant for (drainage) section I, establishment, section II, ditto and labour, A, miscellaneous drainage, to same department, section III, repairs to machinery, B, maintenance of Love Grove Pumping Station, to meet excess on the latter head, due to the heavy repairs which had to be carried out during the recent accident to the engines at the station." No. 12515.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 25393, dated this day, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 560 from savings in the grant for III, Water Works, section I, establishment and labour, G, lakes and reservoirs and filter beds, to same branch, section I, establishment and labour, E, maintenance, to meet excess on the latter head, consequent on payments for overtime labour in repairing bursts of mains for which there is no Budget provision.

No. 12516.

BOMBAY, 1*st March* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.C.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; BHALCHANDRA KRISHNA BHATWADEKAR, Esq., L.M.; GRAITAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; K. M. SHROFF, Esq.; ACCACIO G. VIEGAS, Esq., L.M. & S.; COLONEL W. H. WILSON. H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 22nd ultimo, were signed.

The seal of the Corporation was affixed to deed of contract with Mr. Rahim Meherally for the supply of wood for cremation purposes for the year 1893-94.

No. 12849.

The seal also was affixed to deed of agreement with the Bandora Municipality for the supply of water for a period of five years.

The seal was also affixed to 19 attested duplicate debentures of the Sanitary Works Loan of 1885, Nos. 1105NN-1112NN, 1140NN, 1141NN, 1231NN-1234NN, 1572NN-1574NN, 2800NN-2801NN, of Rs. 500 each.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 26088, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 12851.

Resolved: "That, as applied for by the Commissioner, in his letter No. 25572, dated 24th ultimo, sanction be given to the acceptance by him of the tender of Messrs. Hasanally Moolla Hakimji & Brothers, the lowest of 5 tenders received, for the supply of petty stores during 1893-94 at schedule rates."

No. 12852.

Resolved: "That, as applied for by the Commissioner, in his letter No. 25573, dated 24th ultimo, sanction be given to the acceptance by him of the tender of Messrs. Hasanally Moolla Hakimji & Brothers, the lowest of the three tenders received, for the supply of hardware during 1893-94 at schedule rates."

No. 12853.

Resolved: "That, as applied for by the Commissioner, in his letter No. 25178, dated 20th ultimo, sanction be given, under section 216 of the Municipal Act, to the writing off of Rs. 1,261-5-7, being the amount of irrecoverable bills in respect of property, wheel, water and Halalkhor taxes, &c., as per list submitted with the letter. That the Commissioner be asked to give directions to the Assessor and Collector to take care that, as far as possible, wheel tax bills shall not be allowed to remain in arrears for more than one quarter and that no horses or carriages, liable to wheel tax, escape payment."

No. 12854.

Resolved: "That, as applied for by the Commissioner, in his letter No. 25730, dated 25th ultimo, sanction be given to Daji Krishna, a fitter, and Sonu Ganu, an engine-driver, Love Grove Pumping station, being allowed their full pay at the rates of Rs. 30 and 20 respectively a month for the three days they were unable to attend their duties owing to injuries sustained by them by the ignition of gas around the pumps at the station. The amount to be met from savings in section IV, contingencies and stores for that station."

No. 12855.

Resolved: "That, as applied for by the Commissioner, in his letter No. 25580, dated 24th ultimo, sanction be given to the payment of conveyance allowance of Rs. 20 a month from 1st instant, for the period of three months, to Mr. Kasinath Dewji, Water Works Inspector, G Ward, for doing the work of F Ward in addition to his own duties, as the Inspector of the latter Ward has been granted privilege leave for 3 months. The cost to be met from savings in the grant for inspection, distribution and waste prevention staff, Water Works Budget.

No. 12856.

"That in the opinion of the Committee, except for special reasons, conveyance allowances should not be consolidated with pay."

Resolved: "That, as applied for by the Commissioner, in his letter No. 25650, dated 24th ultimo, the Corporation be recommended to sanction the

No. 12857.

number of gas lamps provided in the Budget for 1893-94 being increased from 3,564 to 3,567 to provide for 3 lamps for the lighting of Armenian Lane now without lamps. The cost, *viz.*, Rs. 150, for putting up the 3 lamps and Rs. 18-9-8 per month for lighting the same to be met out of savings in the grant for gas lighting."

No. 12858. *Resolved* : "That letter No. 25683, dated 25th ultimo, from the Commissioner, be forwarded to the Corporation with a recommendation that sanction be given, as a special case, to the payment of a monthly pension of Rs. 4 from 12th February 1893 to Hari Dewji, one of the animal keepers of the Victoria Gardens, who has on two occasions been mauled—once by a tiger and subsequently by a monkey—and is now incapaciated for further service. The amount to be met from the grant for pensions and gratuities."

Considered letter No. 25574, dated 24th ultimo, from the Commissioner to the Secretary, as under :—

SIR,—Tenders for the work of annual repairs and petty works and for the supply of building materials during the year 1893-94 were received on 21st December 1892, and forwarded to the Executive Engineer for tabulation the next day. In submitting the tabulation, Mr. Murzban reports (22nd instant) that there has not been sufficient competition, as only three tenders have been received for such a large and important work. He suggests that, for works such as this, in which the quantities are not final but variable, the best plan to adopt is the course adopted by Government in the Public Works Department in cases of this kind of works, *viz.*, to fix our own rates and to invite tenders on those rates. It will then be for the contractors to state at what percentage above or below the rates they will undertake to do the works. Under the present arrangement quantities based on works done in the previous year are adopted and the different tenders are tabulated on those quantities and then compared. But the works done or materials supplied during the last year may not have to be done or supplied next year, and the comparison is therefore unreliable. For these reasons I have instructed the Executive Engineer to invite fresh tenders in the manner suggested by him, and I have the honour to request the sanction of the Standing Committee to my entrusting petty works and repairs and to my obtaining building materials from the present contractors, if they are willing, for one month beyond their contract time, at their schedule rate for the year 1892-93.—I have, &c.,

H. A. ACWORTH, Commissioner.

No. 12859. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 25574, dated 24th ultimo, sanction be given to the present contracts for the work of annual repairs and petty works, and for the

supply for building materials being continued for a period of one month beyond their contract time, so as to enable the Commissioner to invite fresh tenders.

"2. That, as further recommended by the Commissioner, sanction be given to the carrying out of the suggestion made by the Executive Engineer, namely, that in future, when tenders are invited for works where the quantities are variable and not fixed, the course adopted by Government in the Public Works Department be followed, namely, the fixing of rates by the Municipality in the first instance, and the invitations for tenders on those rates."

Resolved: "That the following be *recorded* :—Letter No. 12860. No. 25288, dated 21st ultimo, from the Commissioner, reporting that the right of cultivating the ground at Wandra and Khosta were let for various sums to the persons mentioned in the list submitted."*

The consideration of the following notice of motion by Accacio G. Viegas, Esq., was postponed till next meeting :—

"That, considering that lately there has been a combination of several tenderers for Municipal contract works and bidders at public auctions held at the instance of the Municipality, it is desirable that some restraint should be placed on such combinations.

"That the Municipal Commissioner be requested to submit any suggestions which, in his opinion, may be calculated to prevent such combinations."

The consideration of the following was further postponed till the next meeting:—Letter No. 24950, dated 16th ultimo, from the Commissioner, forwarding, for the approval of the Committee and the Corporation, under section 288 of the Act, copy of a draft agreement, which it is proposed to enter into with the Kurla Municipality for a period of five years for the supply of water within their Municipal limits. Letter No. 153, dated 14th ultimo, from the President, Kurla Municipality, forwarding a petition and requesting that a lower rate may be fixed for water to dipping wells in Kurla for free supply to the public.

Resolved : "That, with reference to his letter, dated 27th No. 12861. ultimo, on the subject of water supply to the inhabitants of Bhuleshwar during the Holi Holidays, Mr. Mulji B. Barbhaya be informed that the question has already received the Commissioner's attention."

* Whose rights were sold for the first time.

No. 12862. *Resolved* : "That, with reference to application, dated 13th ultimo, from Dr. Shamsudin Sullemanjee and others, the Corporation be informed that the Commissioner reports that the land required for the roads on the site of the old Race Course has now been bought and that the estimates for their construction, as well as for the drainage and sewerage of the same, are being prepared by the Special Drainage Engineer and will be shortly laid before the Corporation for sanction."

No. 12863. *Resolved* : "That the following be *recorded* :—Memoranda ; Nos. 25308 and 25309, dated 22nd ultimo, from the Commissioner, reporting, with reference to the resolutions of the Committee, Nos. 4484 and 5620, dated 3rd October 1888 and 9th January 1889, the following transfers :—(*a*) of Rs. 43,835-1-9 from the 35 Lakhs various Sanitary Works Loan Deposit Account to the Municipal General Fund Pass Book on 18th idem ; (*b*) of Rs. 12,263-10-0 from the 44 Lakhs Sanitary Works Loan Deposit Account No. 1 to ditto on ditto ; (*c*) of Rs. 1,990-8-0 from the Miscellaneous Works Loan of 1888-89 Deposit Account to ditto on ditto ; (*d*) of Rs. 4,694-2-0 from the 12 Lakhs Drainage and Water Works Loan Deposit Account to ditto on ditto ; (*e*) of Rs. 13,732-12-0 from the Municipal Building Fund Deposit Account to ditto on ditto ; (*f*) of Rs. 37,402-11-0 from the Surplus Cash Deposit Account to ditto on ditto, and of Rs. 6,000 in 5 per cent. Municipal Debentures from the Surplus Cash Deposit Account to the 5 per cent. Municipal Loans Sinking Fund Deposit Account on 14th idem ; and (*g*) of Rs. 6,025 from the 5 per cent. Municipal Loans Sinking Fund Deposit Account to the Surplus Cash Deposit Account on 18th idem.*

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* The Chief Accountant reports that the balance remaining to the credit of the above accounts after effecting the above transfers are as under :—

(*a*)	In 4 per cent. Government Paper for			Rs.	11,54,100		Rs.	11,89,929	4 0
(*b*)	Do.	do.	do.	„	6,20,000	... „		6,06,808	8 8
(*c*)	Do.	do.	do.	„	1,00,000	... „		99,625	0 0
(*d*)	Do.	do.	do.	„	2,35,000	... „		2,34,118	12 0
(*e*)	In 5 per cent. Municipal Debentures			„	8,45,000	at par „		8,45,000	0 0
(*f*)	Do.	do.	do.	„	24,42,500	„ „		24,42,500	0 0
	In 4 per cent.	do.	do.	„	27,000	„ „		27,000	0 0
	Do.	Government Paper		„	4,33,000	cost „		4,31,700	5 0
	In Cash						„	1,06,025	0 0
(*g*)	In 5 per cent. Municipal Debentures for			Rs.	6,13,500	... „		6,13,500	0 0
	In Cash						„	54	15 0

The following return was read and *recorded* :—

No. 12864. Return of fires at Frere Bunder (Sewri), Hamam Gully, Duncan Road, Madanpura (Ripon Road), Two Tanks and Tardeo, forwarded with the Commissioner's memorandum No. 25776, dated 27th February 1893.*

The following statement † was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 26th February 1893.

No. 12865. *Resolved* : "That the following be *recorded* :—Letter No. 25963, dated 28th ultimo, from the Commissioner, reporting that he has allowed Mr. Bhojabhoy Allarakhia, the Municipal hay contractor, to occupy a piece of ground measuring 980 square yards, or thereabout, on the Flats for stacking hay, for one year from 18th January last, on payment of Rs. 80."

No. 12866. *Resolved* : "That, as applied for by the Commissioner, in his letter No. 25817, dated 27th ultimo, sanction be given to the purchase of one thousand tons of Powell's Duffryn coal from Messrs. Dadabhai Hormasjee & Co., at Rs. 17-8-0 per ton, delivered at the Love Grove Pumping Station between 15th and 30th April 1893. The cost to be met from the grant for the purchase of coal for the year 1893-94.

"That, under the terms of section 72 (3) of the Municipal Act, the Committee dispense with the invitation for tenders which would otherwise be necessary, as similar arrangements sanctioned by the Committee's resolutions Nos. 9755, dated 7th January 1891, and 921, 1453, 4271 and 9917 of 1892-93, have been advantageous to the Municipality."

The consideration of letter No. 22745, dated 25th ultimo, from the Commissioner, on the subject of the purchase of 11,675 square yards of land on the Flats, the property of Aga Mahomed Sidik Nimazi, at the rate of Rs. 2 per square yard, was postponed till next week.

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* *See* Appendix C. † *See* Appendix B.

BOMBAY, *8th March* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.C.M.C., *Chairman.*
BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M. ; GRATTAN GEARY, Esq. ; HURKISONDAS NURROTUMDAS, Esq. ; JAVERILAL UMIA-SHANKAR YAJNIK, Esq. ; K. M. SHROFF, Esq. ; R. G. OXENHAM, Esq., M.A. ; ACCACIO G. VIEGAS, Esq., L. M. & S. ; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 1st instant, were signed.

The seal of the Corporation was affixed to deeds of contracts—

(1) with Mr. Bhojabhai Allarakhia for the supply of hay, &c., during the year 1893-94 ;

(2) with Messrs. Moosabhoy Adamji and Sons for the supply of stationery during 1893-94 ;

(3) with ditto for the supply of drawing and surveying materials during 1893-94 ; and

(4) with Messrs. John Fleming and Co. for the supply of disinfectants during 1893-94.

Resolved : " That the following be *recorded* :—Letter No. 695, General Department, dated 3rd instant, from Mr. Under-Secretary Harvey, stating that, under section 46 (1) of the Municipal Act III of 1888, H. E. the Governor-in-Council has been pleased to re-appoint Mr. Grattan Geary a member of the Standing Committee."

No. 13200.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 26507, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 13201.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 26328, dated 6th instant, sanction be given to the transfers of Rs. 212-8-9 and Rs. 65-1-3, respectively, from savings in the grant for Fire Brigade, section III, purchase of 2 steam fire engines, to same head, same section, 5 manual engines, and 3 fire escapes, to meet excess on cost of purchase consequent on the low rate of exchange."

No. 13202.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 26266, dated 4th instant, sanction be given to the continuance of the services of a driver on Rs. 20 per mensem and an

No. 13203.

oilman on Rs. 10 per mensem, to work the 10″ centrifugal pumps at Love Grove, until the new engines and pumps start working. The amount to be met out of the scheduled provision for fourth engineer's salary."

No. 13204.

Resolved : "That, as applied for by the Commissioner, in his letter No. 26296, dated 4th instant, sanction be given, under section 69 (*e*) of the Municipal Act, to a variation of the terms of Messrs. Stephens & Sons' contract, whereby the time allowed for the construction of Fire Brigade brake be extended by fourteen days."

Considered again letter No. 25745, dated 25th ultimo, from the Commissioner to the Secretary, as under :—

SIR,—I have the honor to request the sanction of the Corporation under section 90 (3) to purchase from Mr. Aga Mahomed Sidik Nimazi a plot of ground at Clerk Road, admeasuring about 11,675 square yards shown in red boundary on the accompanying tracing at the rate of Rs. 2 per square yard. Out of the amount of compensation, the 25 years' capitalized value of the abatement of ground rent payable to Government will be paid by Mr. Nimazi.

This land is in the centre of the Municipal Reclamation ground between the main drain and the Railway, and it is essentially necessary that it should be filled in and made a part of the general reclamation. The ground surrounding this plot and recently purchased from the Gordon Mill Company and Mr. Byramji Jeejeebhai has all been filled in. The Health Officer reports that as the available area for the deposit of kachra is now so very limited, and as it is therefore daily a matter of greater difficulty to find space, it is now absolutely necessary that this plot should be acquired at the earliest date possible, for he anticipates difficulty in disposing of the city refuse this coming monsoon for want of space.

Provision of Rs. 1½ lakhs has been made in Loan Works Budget for the year 1893-94 for the purchase of land on the Flats for the purpose, but as no loan will be raised until after the commencement of the rains, I request the Standing Committee to recommend the Corporation to sanction the payment of compensation by advances from available balances to be adjusted hereafter against the loan when raised.—I have, &c., H. A. ACWORTH, Commissioner.

Considered also letter No. 26468, dated 7th instant, from the Commissioner, to the Secretary, as under :—

SIR,—In continuation of this office No. 25745, dated 25th ultimo, I have the honour to request the approval of the Standing Committee, under section 91 (1) of the Municipal Act, to acquire the land referred to under the provisions of the Land Acquisition Act X of 1870, as Mr. Aga Mahomed Sidik Nimazi

is not empowered by the terms of the lease to use it for any purpose except as a burying ground for deceased persons of the Shirazi Sect of the Mogul Community of Bombay.

The Health Officer is of opinion that the use of the ground referred to as a cemetery is not possible and moreover the Sanitary Commissioner had objected to the use of the old cemeteries on either side of Clerk Road. If there is objection to the use of the old cemeteries from their position, there will be still greater objection to the opening of a new place on the site referred to for the disposal of the dead.

Under the circumstances I request the Standing Committee to recommend the Corporation to sanction the payment of compensation awarded by the Collector of Bombay by advances out of available balances to be adjusted hereafter against the loan when raised.

The matter is very urgent and I request the Standing Committee to dispose of it on Wednesday next to enable me to submit the necessary application to Government.—I have, &c., H. A. ACWORTH, Commissioner.

No. 13205. *Resolved* : " That the consideration of letters Nos. 25745 and 26468, dated 25th ultimo and 7th instant respectively, be postponed till next week."

Considered letter No. 25387, dated 22nd ultimo, from the Commissioner to the Secretary, as under :—

SIR,—I have the honour to state that, in consequence of the formation of storm-water reservoir on the Flats, it was necessary to divert the 24" Tulsi main and it was relaid on land on the north of Clerk Road and north-west of Junction Road under the supposition that this land formed part of that which was made over to the Municipality by Government for the purpose. The Agents, Messrs. D. M. Petit, Sons and Co., for the Gordon Spinning and Manufacturing Company drew the attention of the Municipality on 12th May 1886 to this encroachment, and they were asked by the Executive Engineer whether they would sell to the Municipality about 700 square yards occupied by the Tulsi main at Re. 1 per square yard. In response to the Engineer's inquiry, they stated that the whole of their ground measured about 2,244 square yards and demanded Rs. 4 per square yard. They further stated that if they were to sell a portion of the ground, the rest would not be sufficient for their purposes (their letter to the Executive Engineer, dated 28th August 1888). The Acting Commissioner, therefore, decided that the whole of the plot should be acquired and that as this (Gordon Mills) land is low-lying and worth little more, if any, than Mr. Byramji Jijibhai's land acquired through the Collector of Bombay for the deposit of kachra, they should be offered the rate awarded by the Collector for the latter. They were offered accordingly Re. 1-12-9 per square yard, but they declined to accept this and again demanded Rs. 4 per square yard. I considered this rate

too high for land in that locality and offered them Rs. 2 per square yard without prejudice. After a delay of 17 months they now claim (on the 16th January 1893) payment of compensation at the rate offered, *viz.*, Rs. 2 and demand interest at 6 per cent. from 12th May 1886 up to the date of payment. The area as given in the deed plan in their possession is 2,244 square yards, but the area actually obtained is 2,357 square yards. Out of this, about 700 square yards are occupied by the Tulsi main and the rest is required for Road Department purposes.

The cost of this land is debitable to the allotment for the Surface Drainage Works, but as the savings thereof have already been appropriated for other works with the sanction of the Corporation, I request the Standing Committee to recommend the Corporation to sanction the payment of compensation at the rate of Rs. 2 per square yard of the area that may be obtained by actual measurement, together with interest at 6 per cent. from 12th May 1886 up to date of payment, subject to such deduction as it may seem fair and feasible to make for the period of 16 months during which Messrs. D. M. Petit, Sons & Co. made no reply to the Commissioner's offer. The cost can be met from savings on the drainage works included in the loan of Rs. 10,08,500.—I have, &c., H. A. ACWORTH, Commissioner.

No. 13206.

Resolved : " That letter No. 25387, dated 22nd ultimo, from the Commissioner, be forwarded to the Corporation with a recommendation that sanction be given to the purchase, from the Agents of the Gordon Spinning and Manufacturing Company, of 2,357 square yards, or thereabout, of land shown within red colour on the tracing marked B, dated this day, filed in supplement to Minute Books, a portion of which was inadvertently occupied by the Municipality for the diversion of the 24" Tulsi main in connection with the formation of the storm-water reservoir on the Flats.

" That the Corporation be further recommended to sanction the payment of compensation for this land at the rate of Rs. (2) two per square yard together with interest at 6 per cent. from 12th May 1886 up to date of payment, subject to such deduction as it may seem fair and feasible to make for the period of 16 months during which no reply was received to the Commissioner's offer of payment of compensation, and that payment to be made for such ground obtained by actual measurement. The cost to be met from savings on the drainage works included in the loan of Rs. 10,08,500."

No. 13207.

Resolved : " That, as applied for by the Commisssioner, in his memorandum No. 26108, dated 1st instant, the Corporation be recommended to

sanction the signing of cheques for the following expenditure not separately provided for in the Budget for 1893-94, as advances to be subsequently adjusted against Budget grants or by cash recoveries, *viz.*, advances to Municipal officers, Rs. 15,000; Private and Departmental Works, Rs. 1,00,000; General Stock (carbolic acid powder, disinfectants, &c.), Rs. 25,000; Building and Repair Certificates and Water Connections Forms, Rs. 2,000; purchase of Stores for Water Works maintenance, New Works, Sales, &c., Rs. 2,00,000 : total Rs. 3,42,000."

Considered letter No. 4095, dated 2nd instant, from the Chief Accountant to the Commissioner, as under :—

Sir,—In forwarding herewith a copy of the Municipal Solicitors' letter, dated the 24th ultimo, addressed to this office, regarding the payment of the purchase money for the plots of land at Agripada to be acquired from Mr. Muncherjee Framjee Cama and Bai Motlibai, I have the honour to state that the total amount which will be required by the Solicitors probably by the end of this month will be about Rs. 9,30,000, of which Rs. 1,75,000 are payable on the 21st instant.

2. As this is the closing month of the official year 1892-93, we shall have to provide, in addition to the above amount, a further sum of Rs. 3,70,000 for payment to the Municipal Buildings and other Contractors on account of works done or supplies made during the year, bills for which are likely to be submitted to this office, thus making a total sum of Rs. 13 lakhs to be provided for by us.

3. The Standing Committee in their Resolution No. 6743, dated 28th September 1892, sanctioned the sale of further Government Securities not exceeding Rs. 5 lakhs to meet expenditure on Loan Works, &c., out of which, paper for Rs. 3 lakhs has already been sold, and the remaining paper for Rs. 2 lakhs will have to be sold during the current month to meet a portion of the payments aggregating Rs. 13 lakhs referred to above.

4. The balance of Rs. 11 lakhs will have to be met from the sale proceeds of Government Securities of that value. I have therefore the honour to request the favour of your obtaining the sanction of the above body to the necessary sale of invested funds.

5. As the Committee in their Resolution No. 7073, dated 19th February 1890, fixed the maximum sum to be transferred each month during the working season from Loan Funds to the Municipal General Fund at Rs. 8 lakhs, may I also request the favour of your obtaining their further sanction to the additional transfers being made during the current month, to the extent of Rs. 5 lakhs.—I have, &c., SORABJI NAVAROJI COOPER, Chief Accountant.

No. 26148 of 3rd March 1893.

Forwarded to the Standing Committee for favour of sanction to the proposals made in paras. 4 and 5.—H. A. ACWORTH, Commissioner.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 26148, dated 3rd instant, sanction be given to the sale, from time to time, of Government Securities, not exceeding Rs. eleven lakhs, in which balances of certain of the Municipal loan funds have been invested, to meet payments during the current and ensuing months on account of the purchase of land at Agripada and other loan works in progress and supplies, and of meeting further expenditure on account of such loan or other works and supplies, &c., during the course of the year.

No. 13208.

"That, in order to meet these charges, the limit of transfers from the different loan or other invested funds to the general fund be increased during the current month only from Rs. 8 lakhs, fixed by the Resolution of the Committee, No. 7073, dated 19th February 1890, to Rs. 13,00,000.

"That each sale of the said securities be reported to the Committee within seven days."

Resolved : "That, as applied for by the Commissioner, in his letter No. 26378, dated 6th instant, sanction be given, under section 92 (*b*) of the Municipal Act, to the sale, to Mr. Amirjee Vallajee for Rs. 510, of the materials of chawl situate on the north side of the Victoria Gardens purchased from Mr. Damodhar Tapidas."

No. 13209.

The consideration of the following was resumed :—

Proposed by Accacio G. Viegas, Esq.—

"That, considering that lately there has been a combination of several tenderers for Municipal contract works and bidders at public auctions held at the instance of the Municipality, it is desirable that some means should be adopted to secure the Municipality against undue advantage being taken of it.

"That the Municipal Commissioner be requested to submit any suggestions which, in his opinion, may be calculated to prevent loss to the Municipality by reason of such combination."

The motion which was seconded by Bhalchandra K. Bhatawadekar, Esq., was *lost*.

Resolved : "That the existing rates for the supply of water by meter and for meter hire, under sections 169 and 276 of the Municipal Act, be continued during the year 1893-94, as proposed by the Commissioner in his letter to the Secretary, No. 26381, dated 6th instant, provided that, in the case of all water-

No. 13211.

closets having separate metre connections, a compounded sum be charged, calculated at 6 annas per 1000 gallons, subject to the payment for general purposes and water-closets, together, aggregating not less than the usual minimum of half the tax on value of the whole premises.

"That, in the case of religious and charitable institutions under Government, a triennial permanent sum, in each case based upon the previous three years' meter-readings, be charged."

Read letter No. 26379, dated 6th instant, from the Commissioner to the Secretary as under :—

SIR,—I have the honor to state that, while the Byculla Steam Fire Engine was returning from a fire at Frere Bandar at about 10 p.m. on the 18th ultimo, an accident occurred on Kala Chowkey Road.

As this road is about 25 feet wide and there is a gutter on either side of it, the Foreman in charge of the engine was returning at a slow pace and keeping the centre of the road to avoid the gutters. His lamps were burning brightly. But as he advanced he observed 3 foot-passengers who were walking in a line with one another, coming towards him apparently heedless of the approach of the engine. He and the coachman at once kept on shouting to them, but it was not till the men were within 5 or 6 paces of the horses that they appeared to be aware of their position, and they in a panic threw up their arms and made a simultaneous rush to the side of the road. The engine had been brought to a stand-still, but the near horse was startled and swerved against the other horse so as to force one of the front wheels of the engine into the gutter.

The engine was tilted to a considerable angle and the three men who had gone off the road into the gutter were jammed between the engine and the rubble wall of a mill compound. One of them managed to extricate himself and the Foreman and men immediately raised the forecarriage of the engine with the pole and lifted the fore-wheel out of the gutter. This released the second man, but the third named Pandoo Gopal was killed on the spot.

His widow has applied for some gratuity, as by her husband's sudden death she and her child have been deprived of their only means of livelihood.

I do not think she can claim any compensation as of right, as the man, in my opinion, met his death by his own fault, and if the Standing Committee choose to recommend the Corporation to make any grant in this case, it should be distinctly stated that it is made as a matter of grace, not of right. I have perused the evidence taken at the Coroner's inquest and questioned the Foreman. The jury advised that the horse (mare) which was frightened and caused

the accident should be got rid of, but I do not concur in this recommendation as she is a perfectly docile animal and it is not wonderful that three men suddenly shouting, throwing up their arms and starting to one side under her very nose should have frightened her.—I have, &c., H. A. ACWORTH, Commissioner.

Proposed by Javerilal U. Yajnik, Esq., seconded by Hurkisondas Nurrotumdas, Esq.—

No. 13212. "That the following be forwarded to the Corporation with the recommendation that, as a matter of grace, the sum of Rs. 200 be awarded to the widow of Pandoo Gopal, a Mill labourer who was killed in the Kala Chowkey Road on the 18th February last by an accident which happened to the Byculla steam fire engine. The charge to be debited to Surplus Cash Balance :— Letter No. 26379, dated 6th instant, from the Commissioner to the Secretary."

Carried.

Considered letter No. 24950, dated 16th February 1893, from the Commissioner to the Secretary, as under :—

SIR,—The President of the Kurla Municipality having represented to me that that Municipality was willing to enter into an agreement with us for the supply of water within their Municipal limits similar to the one with the Bandora Municipality, I have the honour to forward herewith, for the approval of the Standing Committee and the Corporation, under section 288 of the Municipal Act, draft of an agreement to be entered into for 5 years. It is, in most respects, similar to the one with the Bandora Municipality which the Corporation have approved of, except that the rate for water supplied to dipping wells and public fountains for gratuitous use by the public is fixed at annas 8 per 1000 gallons. It is also provided that the Kurla Municipality should exempt us from the payment of any tax or rate in respect of all our water works and buildings and lands in connection therewith situated within their limits.—I have, &c., H. A. ACWORTH, Commissioner.

Resolved : No. 13213. "That, as applied for by the Commissioner, in his letter No. 24950, dated 16th ultimo, the Corporation be recommended (1) to sanction, under the terms of section 288 of the Municipal Act, an agreement being entered into with the Kurla Municipality for a period of 5 years for the supply to them of water within their Municipal limits and on the terms and conditions set forth in the draft agreement ; (2) to inform the President, Kurla Municipality, in reply to his letter No. 153, dated 14th idem, that the charge for water

supplied to that Municipality for consumption gratuitously cannot be reduced below eight annas per 1000 gallons ; (3) that the Commissioner be asked to insert a clause in the contract providing that, in case of any extension in Kurla of the free service from dipping wells during the term of this contract, the Municipal Corporation of Bombay will be prepared to reconsider the rate on water supplied to those wells in spite of the fact that this contract has not expired."

No. 13214. *Resolved* : "That the following be forwarded to the Commissioner for report and that the applicant be informed accordingly :—Memorandum from the Municipal Secretary, forwarding letter, dated 1st instant, addressed to the Corporation by Mr. J. M. Moses, submitting a letter, addressed to the Health Officer by the residents of Wodehouse Road, Colaba, regarding the offensive effluvia that emanates from the sea-shore."

No. 13215. *Resolved* : "That the following be forwarded to the Commissioner for disposal and that the applicant be informed accordingly :—Letter, dated 22nd ultimo, from Mr. Nana Bhawoo on the subject of the drainage of his property situate in New Line Street opposite Lohar Chawl."

No. 13216. *Resolved* : "That the following be forwarded to the Commissioner for favour of remarks and that the applicants be informed accordingly :—Letter, dated 28th ultimo, from Messrs. Pandurung Neellaji and Anant Vithoba on the subject of the water supply to Koombherwara, lower Mahim."

No. 13217. *Resolved* : "That the report of the Health Officer for the fourth quarter of 1892 be passed on to the Corporation."

No. 13218. *Resolved* : "That, with reference to certain additional claims made by Messrs. Walsh, Lovett, Mitchell & Co., the contractors for the construction of the Tansa Duct works from Tansa to Ghatkoper, aggregating Rs. 6,68,324, the Standing Committee beg to report to the Corporation that, having carefully considered the claims in question and taken the opinion of Counsel thereon, the Committee recommend that the Commissioner be authorised to offer Messrs. Walsh, Lovett, Mitchell & Co.

Rs. 11,000 in respect of item 11 of their claims as under,* provided they accept the same in full satisfaction of all their claims.

"That, if the Corporation approve of this recommendation, the Rs. 11,000 can be paid for out of the additional grant sanctioned by them in their Resolution No. 12693 of 23rd February 1893."

The following statement† was laid on the table:—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 5th March 1893.

Resolved: "That letter No. 26476, dated this day, from the Commissioner, and its accompaniments, be printed and circulated and brought on for consideration at the next meeting."

No. 13219.

BOMBAY, 15*th March* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., G.G.M.C., *Chairman*.
ABDALLA M. DHARAMSI, Esq., B.A., LL.B.; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; and the SECRETARY.

The minutes of the meeting held on the 8th instant, were signed.

The seal of the Corporation was affixed to deed of contract with Mr. Laxmidas Shamji for the work of widening a portion of Ridge Road, at the Gibbs Road end of the Ridge.

The seal was also affixed (1) to 1 attested duplicate debenture of the Municipal Loan of 1878, No. 4587 of Rs. 500; (2) to 4 consolidated debentures of ditto, Nos. 1698-99 of Rs. 1,000, Nos. 4653-93 of Rs. 20,500, Nos. 5282-91 of Rs. 5,000, Nos. 5296-5331 of Rs. 18,000; (3)

* Claim No. 11 is for additional rate for tunnelling in one of the tunnels and is urged on the ground that there was an error in giving the bench mark fixing the level at which this tunnel was to be driven. The Engineer admits that there was such an error, but points out that any claim by the contractors on this account is barred by the provisions of article 5 of the contract which renders the contractors responsible themselves for seeing that the work was correctly set out according to drawings. The Engineer adds that the extra quantity of excavation which the error entailed on the contractors was 13,600 c. ft., which at the contract rate for tunnel driving will amount to Rs. 11,000, which, though it cannot be claimed as a right, might, he suggests, as a matter of grace, be conceded to the contractors.

† *See* Appendix B.

to 1 attested duplicate debenture of the Tansa Water Works Loan, No. 13933 of Rs. 500 ; (4) to 2 consolidated debentures of the Sanitary Works Loan of 1885, Nos. 1030-69 NN. of Rs. 20,000, and Nos. 2046-49 NN. of Rs. 2,000 ; and (5) to 2 subdivided debentures of the Municipal Building Loan Nos. 981-5 and 986-90 of Rs. 5,000.

Resolved : " That the following be *recorded* :—Letter No. 749, General Department, dated 8th instant, from Mr. Under-Secretary Harvey, stating that, under section 46 (1) of the Municipal Act III of 1888, H. E. the Governor in Council has been pleased to appoint Mr. E. B. Carroll, M.I.C.E., a member of the Standing Committee *vice* Colonel Wilson."

No. 13441.

Resolved : " That, as applied for by the Commissioner, in his memoranda Nos. 26415 and 26583, dated 7th and 9th instant, sanction be given. under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

No. 13442.

Names of Owners.	Where.
Mr. Harivallabdass Balgovindass ...	Building at Mahim Bazaar Road.
„ Khataw Natha	Do. at No. 2 Manordas St."

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 27189, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 13443.

Resolved : " That, as applied for by the Commissioner, in his memorandum No. 26579, dated 9th instant, sanction be given to the transfer of Rs. 116 from savings in the grant for Assessment and Collection Department, Property and Wheel Tax Establishment (section II, Ward Inspection Office), to same head, section I, Head Quarter Office, Account and Registration, to meet excess on the latter head for acting allowance payable to acting incumbents during the absence of the Deputy Accountant on privilege leave for 2 months."

No. 13444.

Considered again letters Nos. 25745, dated 25th February 1893, and 26468, dated 7th instant, from the Commissioner, to the Secretary.*

Proposed by Abdalla M. Dharamsi, Esq., seconded by Javerilal Umiashankar Yajnik, Esq. —

" That letters Nos. 25745, dated 25th ultimo, and 26468, dated 7th instant, from the Commissioner to the Secretary, be forwarded to the Corporation

No. 13445.

* *See* printed Proceedings of the Standing Committee of the 8th instant.

with the recommendation that sanction be given to the purchase of a plot of land (shown on plan marked A) in the centre of the ground already reclaimed with town sweepings by the Municipality and admeasuring 11,675 square yards, or thereabout, the property of Aga Mahomed Sidik Nimazi, such additional land being required for the further deposit of sweepings.

"That, under the terms of section 91 (1) of the Municipal Act III of 1888, the Committee approve of application being made to Government for the taking up of this ground under the provisions of the Land Acquisition Act X of 1870, the Committee recording their opinions that the provisions of the Land Acquisition Act should not be resorted to merely for the purpose of acquiring a good title to the land, but that the question of valuation should be fought out before the Collector.

"The amount of the Collector's award to be paid by an advance from available balances to be adjusted against the loan of Rs. 1,50,000, for the purchase of additional land on the Flats, as sanctioned in the Budget for the year 1893-94."

Carried.

No. 13446. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 26524, dated 8th instant, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against one Sayad Kassam bin Sayad Hussein for the recovery of Rs. 218-8-6, being the amount of property taxes due in respect of C Ward No. 7253, Khoja Street, for the first halves of 1891-92 and 1892-93 and the second half of 1892-93."

No. 13447. *Resolved*: "That, as applied for by the Commissioner, in his memorandum No. 26815, dated 11th instant, sanction be given, under sections 211 and 517 (*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Mr. Ahmed Saheb Makba, the Fazendar, for the recovery of Rs. 119-0-7, being the amount of property taxes due in respect of F Ward, No. 1008 (2), Parel Road, for the period commencing from the first half of 1890-91 to the second half of the current year."

No. 13448. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 26747, dated 10th instant, sanction be given, under sections 211 and 517

(*j*) of the Municipal Act, to a suit being filed in the Court of Small Causes against Adam Aba Patel, owner, and Kharsedji Kavasji Daruwala, mortgagee of property, Ward No. 3877 (16 A), Street No. 64, Ripon Road, for the recovery of Rs. 270-2-0, being the amount of general water and halalkhor taxes due for the first and second halves of 1889-90, ditto 1890-91, ditto 1891-92, ditto 1892-93."

Resolved: "That, as recommended in the Commissioner's letter to the Secretary No. 23067, dated 24th January last, and with reference to further letter from the Commissioner No. 26968, dated 13th instant, sanction be given to the payment of Rs. 300 to Messrs. Bhedwar & Co., in full settlement of their claims for extra works in carrying out their contract for laying water mains in Forbes Street and other places. The cost to be met out of savings in the renewed grant for laying additional mains."

No. 13449.

Considered letter No. 2074, dated 25th ultimo, from the Chief of the Fire Brigade to the Commissioner, as under:—

SIR,—I have the honour to report that during the recent heavy grass fires I found our present supply of hose very inadequate, not that we had an insufficient supply at these Fires, but it so distressed the Brigade that it left me very much in doubt as to our efficiency in event of other fires occurring during the time we have been working at them, and I therefore had to lessen the quantity of hose at manual stations in order to have as near as possible an efficient supply at steam stations.

2. In order to obviate this in future, I beg to request your sanction for an additional 75—100 feet lengths being supplied to the Brigade as early as convenient.

3. The cost amounting to about Rs. 9,000 could be met from surplus cash balance of current year's Budget.—I have, &c., W. NICHOLLS, Chief Officer of the Fire Brigade.

Also memorandum No. 4249, dated 11th March 1893, from the Chief Accountant to the Commissioner as under:—

SIR,—Under the Fire Brigade Budget, there have accrued during the current year savings aggregating Rs. 9,357-5-9, as detailed in the margin, which would swell the cash balance at the end of this month. (2) If the Chief's proposal meets with your approval, sanction of the Standing Committee

Fire Brigade.	Rs.	a.	p.
Section I, Establishment	... 5,307	5	9
Section II, Rent	.....		
Repairs and miscellaneous feed of horses	... 500	0	0
Contingencies for extinguishing fires	... 2,500	0	0
Section III, purchase of stock ...	.....		
One brake	... 1,050	0	0
Savings	... 9,357	5	9

and Corporation will have to be obtained to an extra grant of Rs. 9,000 from surplus cash balance to order out the additional hose as early as convenient and to be paid for during 1893-94. —SORABJI NAVAROJI COOPER, Chief Accountant.

No. 2692 OF *13th March* 1893.

Forwarded to the Standing Committee and the Corporation for favour of sanction to the cost of the hose required being met out of savings pointed out by the Chief Accountant.—H. A. ACWORTH, Commissioner.

No. 13450. *Resolved* : " That, as applied for by the Commissioner in his memorandum No. 26926, dated 13th instant, the Corporation be recommended to sanction the grant of Rs. 9,000 from surplus cash balance to meet the cost of 75—100 feet lengths of additional hose for Fire Brigade."

No. 13451. *Resolved* : " That, with reference to letter No. 26966, dated 13th instant, from the Commissioner, to the Secretary, sanction be given, under section 69 (*e*) of the Municipal Act, to a variation of contract with Messrs. Killick, Nixon & Co., whereby the quantity of Powell's Duffryn Cardiff Coal, supplied by them under the Committee's Resolution No. 10083 of 4th January 1893, be increased by 1 cwt. 1 qr. 8 lbs."

No. 13452. *Resolved* : " That the following be *recorded* :—Letter No. 26967, dated 13th instant, from the Commissioner, reporting the purchase of 150 tons of Bengal Coal from Messrs. Killick, Nixon & Co., at Rs. 16 per ton, delivered at the Municipal Workshops.

" That the Commissioner be asked to report the result of the trials made of this coal at the Pumping Station and at the Workshops."

It was agreed that the consideration of the following items be postponed:—(1) Letter No. 26476, dated 8th instant, from the Commissioner, reporting on the condition of Kamathipura ; (2) memorandum from the Municipal Secretary, forwarding letter, dated 13th instant, from Messrs. Payne, Gilbert and Sayani, submitting a petition to the Corporation by Mr. Sittaram Luxman, contractor for the Tansa Pipe Line from Ghat Kopar to Kalachowki Road, on the subject of his claim for bonus for the early completion of the work.

Read letter No. 27108, dated 14th instant, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honor to forward a letter from Mr. R. Walton, late Executive Engineer, on the subject of his pension. Had the new rules been in existence at the date of his retirement, his pen-

sion would have been Rs. 333-5-4. I never received the letter referred to in Mr. Walton's third para. He was at the date of his retirement entitled to an extension of sick leave on half-pay for 3 months from 6th December 1892, and 9 months more on quarter pay. It was, therefore, open to him to have deferred his resignation until the rules were sanctioned and this, it appears from his letter, he wished to do, but his communication miscarried.

2. I think, considering Mr. Walton's long and able service, the Corporation should take his request into their most favourable consideration, and I hope they will sanction the higher pension in anticipation of confirmation of the new rules.—I have, &c., H. A. ACWORTH, Commissioner.

2, LEXHAM GARDENS, KENSINGTON,
LONDON, W., *January 27th*, 1893.

To H. A. ACWORTH, Esq., C. S.,
Municipal Commissioner, Bombay.

SIR,—I have the honor to acknowledge the receipt of your letter No. 20751 of 1892-93, dated December 30th, 1892, giving cover to a resolution of the Standing Committee of the Corporation of Bombay, by which I am informed that a pension of Rs. 250 per mensem has been granted to me under the old Rules of the service. With reference to this matter, I have to request the favour of your allowing me to make, through you, the following representations to the Corporation, with the hope that they may be induced to allow me to take the benefit of pension under the new rules.

I. At the time of forwarding my resignation I was under the impression (having been so informed) that the new rules were in force as regards pension, and that I should be entitled to the benefit of them, and as I was desirous to facilitate the wishes of the Corporation in regard to their arrangements, I waived my claim to further leave, to which I was entitled, and sent my resignation under the full impression that my claim to pension would be considered by the Corporation under the new rules.

II. That, had I not been impressed with the view that I was meeting the wishes of the Corporation in expediting my resignation, I should have claimed the further extension of leave to which I was entitled, and which would have been a pecuniary benefit to me.

III. That, in forwarding my resignation with medical certificate, I also sent (by the same mail and of the same date) a second letter by which I asked to be allowed to withdraw my resignation in favour of an extension of leave; and that if this request had been complied with, I should have been not only pecuniarily benefited, but also in a position to retire from the Municipal service under the benefits of the new Pension Rules.

IV. That I have served the Municipality of Bombay from March 1868 until December 1892, nearly 24 years; during which period

I have never left my post except when compelled by serious illness to do so ; the first occasion being on 3rd September 1880 when I was granted 6 months' sick leave (after 12 years' service), the second in February 1888 when I was prostrated by typhoid fever, and the third in December 1891 when attacked with dysentery.

V. That I have contributed to pension a sum calculated on a basis nearly three times in excess of that required by the old rules to secure the maximum pension.

VI. That, in consideration of the fact that my health has been broken down and my constitution undermined by a serious illness contracted in the discharge of my duties, the Corporation may allow my full service to count for pension under the new Rules.

I most respectfully put these representations forward with the hope that my long service, the numerous important works which I have designed and carried out for the Corporation, taken into consideration with them, may induce the Corporation to deal with my case with that liberality and justice which always distinguish the actions of the Corporation of the Municipality of Bombay.—I have, &c., RIENZI WALTON.

No. 13453. *Resolved* : " That the consideration of Mr. Walton's application, dated 27th January last, be postponed for a fortnight and that the Commissioner be asked to inform the Committee of the amount contributed by Mr. Walton towards the Pension Fund."

The following return was read and *recorded* :—

No. 13454. Return of fires at Kamathipura 11th Lane, Darukhana (Mazagon), Hanuman Lane (Kalbadevi Road), Paidhowni Road and Haines Road, forwarded with the Commissioner's memorandum No. 26396, dated 6th March 1893.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 12th March 1893.

No. 13455. *Resolved*: " That the following *be recorded*:—Letter No. 27110, dated 14th instant, from the Commissioner to the Secretary, reporting that the work of preparing models of enrichments and carving for the new Municipal Office building as per list submitted was entrusted to the Principal, School of Art. The cost Rs. 1,377 to be met out of the grant for contingencies for the new building.

* *See* Appendix C. † *See* Appendix B.

BOMBAY, *22nd March* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, ESQ., C.C.M.C., *Chairman.*

ABDALLA M. DHARAMSI, ESQ., B.A., LL.B. ; BHALCHANDRA KRISHNA BHATWADEKAR, ESQ., L.M. ; GRATTAN GEARY, ESQ., HURKISONDAS NURROTUMDAS, ESQ. ; JAVERILAL UMIASHANKAR YAJNIK, ESQ. ; KAIKHOSRO N. KABRAJI, ESQ. ; K. M. SHROFF, ESQ. ; R. G. OXENHAM, ESQ., M.A. ; ACCACIO G. VIEGAS, ESQ., L. M. & S. ; COLONEL W. H. WILSON.

H. A. ACWORTH, ESQ., I.C.S., Commissioner ; and the SECRETARY.

The minutes of the meeting held on the 15th instant, were signed.

The seal of the Corporation was affixed to deeds of contracts (1) with Mr. Sorabji Jamsetji for the work of constructing latrines and urinals in the Kennedy Sea Face Garden near Charni Road Station, and (2) with Mr. Sorabji Jamsetji for the work of winding, repairing, &c., Municipal clocks.

No. 13688. *Resolved* : " That, as applied for by the Commissioner, in his memoranda Nos. 27528 and 27637, dated 18th and 20th instant, sanction be given, under section 351 (2) of the Municipal Act, to the removal of the following structures built without permission :—

Names of owners.	Where.
Mr. Maneckchand Kaperchand....	Building at No. 9-13, Vithalwadi.
„ Govindji Thakersey Mulji....	Do. at Ganeshwadi."

No. 13689. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 27786, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 13690. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 27408, dated 17th instant, sanction be given to the transfer of Rs. 80 from savings in the grant for B, public lighting, section II, F, gas lighting, contingencies, Executive Engineer's budget, to section I, winding up and keeping in order Municipal clocks, Commissioner's general office establishment, to meet excess on the latter head, on account of winding clocks attached to the automatic pressure gauges."

No. 13691. *Resolved* : " That, as applied for by the Commissioner, in his memorandum No. 27582, dated 18th instant, sanction be given to the transfer of

Rs. 73-3-10 from savings in the grant for new works, alteration of Engine House, Malabar Hill Reservoir, to same budget, same head, chawki for watchmen and other improvements at Bhandarwada Reservoir."

Resolved: "That the following be *recorded* :—Letter No. 27322, dated 16th instant, from the Commissioner, stating that the work of pitching the roadway under the south and west porches of the new Municipal Offices with blue trap stone has been entrusted to the paving contractors, Messrs. Behramji Jehangir & Co., in continuation of their contract, at a total cost of Rs. 995. (2) That of this sum, Rs. 747 be debited to section I, purchase of materials, and Rs. 248 to section II, cart hire and labour, Engineer's budget."

No. 13692.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 27526, dated 18th instant, sanction be given to the transfer of Rs. 490 from savings in the grant for A, Victoria Gardens, section II, feed of animals, to same head, section II, sea sand and other contingencies, to meet the cost of binding old botanical works and for payment of Municipal taxes."

No. 13693.

Resolved : "That the following be *recorded* :—Letter No. 27451, dated 17th instant, from the Commissioner, reporting that he has accepted the tender of Mr. Dosabhai Barjorji Padhra, the lowest of the six tenders received, for making and pitching the slopes of portions of Haines Road. The amount Rs. 1,818 to be met out of the renewed grant for the work."

No. 13694.

Resolved : "That, as applied for by the Commissioner, in his memorandum No. 27638, dated 20th instant, and subject to the approval of the Corporation, under section 133 (2) of the Act, sanction be given to the transfer of Rs. 4,000 from savings in the grant for Conservancy, earth to cover kutchra deposits, to same head, section 2, labour, B (repairs to roads opened for cleaning drains), to meet excess on the latter head due to increase in the number of openings."

No. 13695.

Read memorandum No. 27043, dated 14th instant, from the Commissioner to the Executive Engineer as under :—

The B. B. & C. I. Railway have been about to take legal proceedings to compel the Municipality to stop the discharge of night-soil into the Gun Carriage Basin drain whether direct from

baskets or from the latrine at the Ordnance lines. The Solicitors advise that the position of the Municipality in respect of these actions is unsatisfactory, and it will be well to adopt other means of disposing of the night-soil. With regard to cutting off the connection between the latrine and the drain, orders will be issued later, but the Executive Engineer is requested immediately to undertake the construction of a collecting night-soil depôt in Thomas Street alongside the present hopper. All that is needed is to screen off with corrugated iron a space sufficient to contain about 4 night-soil carts with their bullocks. The Health Officer will specify distinctly what is required.

The Health Officer must divert to Colaba the necessary number of carts and the night-soil must be taken to Carnac Bunder. The cost is to be reported, but the work must be undertaken at once under section 61 (3) (*c*).—H. A. ACWORTH, Commissioner.

No. 27318 OF 16TH MARCH 1893.

Copy forwarded to the Municipal Secretary for the information of the Standing Committee and the Corporation. The cost will be reported hereafter.—H. A. ACWORTH, Commissioner.

Resolved : "That the following be forwarded to the Corporation :—Memorandum No. 27318, dated 16th instant, from the Commissioner, forwarding copy of memorandum No. 27043, dated 14th idem, addressed to the Executive Engineer, on the subject of the removal of night-soil from Colaba."

No. 13696.

Resolved : "That, in reply to their application, dated 28th ultimo, Messrs. Pandurang Neellaji and Anant Vithoba be informed that the list of places to which water mains are to be extended is now being prepared and includes a main for Lower Mahim.

No. 13697.

"2. That, as applied for by the Commissioner, in his letter No. 27740, dated this day, the Corporation be recommended to sanction the advance of Rs. 30,000 from available balances to defray the cost of the extension of mains in different parts of the city as provided in the loan works budget for 1893-94, the Rs. 30,000 to be hereafter adjusted to the debit of the Rs. 17,55,000 Loan for Water Works (page 76 of the Budget)."

Considered letter No. 27745, dated this day, from the Commissioner, to the Secretary, as under :—

SIR,—I have the honour to report for the approval of the Standing Committee, under section 407 (*h*) of the Municipal Act, the undermentioned rights sold by public auction on the 20th instant, for collecting squatters' fees at the different Municipal Markets and

fair ground and feeding fees at the Municipal Slaughter Houses at Bandora, for one year, from 1st April 1893 to 31st March 1894.

Names of Markets.	Names of the highest bidders.	Amount realized for 1893-94.	Amount realized for 1892-93.
Fort Market	Ramchandra Mahadu ...	1,500	1,600
Arthur Crawford Fish, Mutton and Beef Markets	Haji Ahmed Abu ...	7,000	7,300
Erskine Road Fish Market	Do. ...	16,600	17,250
Pedder Market ...	Dewraj Somji ...	1,575	1,525
Arthur Crawford Market Scales	Rahimanbhai Hasanbhai	4,100	4,200
Bandora Slaughter House fair ground and feeding fees	Fazal Pirbhai, Abdul Ali Karimbhai, and Haji Tyab Haji Guni ...	55,100	55,100
		85,875	86,975

It will be seen that, except for the Pedder Market and the Bandora Slaughter Houses, all the bids are less than those for the current year, that the total of all the offers is less than that of the year 1892-93 by Rs. 1,100.

The right to collect license fees from the Fadkaries and Kamatries at the DeLisle Road Market was also put up to auction, but the result was unsatisfactory, and if no adequate offer is privately received, the fees will be collected departmentally.—I have, &c., H. A. ACWORTH.

No. 13698. *Resolved*: "That, as applied for by the Commissioner, in his letter No. 27745, dated this day, the Committee approve, under Section 407 (*b*) of the Municipal Act, of the sale of the undermentioned rights for collecting squatter's fees at the different Municipal Markets and fair ground, and feeding fees at the Municipal Slaughter Houses at Bandora for one year from 1st April 1893 to 31st March 1894, *viz.*:—Fort Market, to Ramchandra Mahadu, for Rs. 1,500; Arthur Crawford Fish, Mutton and Beef Markets, to Haji Ahmed Abu, for Rs. 7,000; Erskine Road Fish Market, to ditto, for Rs. 16,600; Pedder Market, to Dewraj Somji, for Rs. 1,575; Arthur Crawford Market scales, to Rahimanbhai Hasanbhai, for Rs. 4,100; Bandora Slaughter Houses fair ground and feeding fees, to Fazal Pirbhai, Abdul Ali Karimbhai and Haji Tyab Haji Guni, for Rs. 55,100—total Rs. 85,875."

Resolved : "That, with reference to memorandum
No. 13699. No. 27412, dated 17th instant, from the Commissioner, to the Secretary, the Committee is of opinion that the terms of Messrs. Sittaram Luxumon's contract for laying the Tansa pipes from Ghatkopar to Bombay should be adhered to in reckoning the maintenance period of the work."

Resolved : "That, as applied for by the Commissioner,
No. 13700. in his letter No. 27796, dated this day, sanction be given to the acceptance by him of the tender of Messrs. Walsh, Lovett & Co., aggregating Rs. 1,07,690, the lowest of the four tenders received for the supply of pipes, valves and fittings, &c., for the Water Works Department, at schedule rates. The amount to be debited to the advance of Rs. 2,00,000 for the purchase of stock, or recouped by sale proceeds, or debited to the grants for works for which the pipes, &c., may be used."

Resolved : "That, as applied for by the Commissioner,
No. 13701. in his letter No. 27581, dated 18th instant, sanction be given to the payment of Rs. 75 to Mr. Kavasji Behramji, Inspector, Executive Engineer's Department, being travelling allowance of Rs. 15 per mensem, during the 5 months he was engaged in supervising the alterations to the Engine House, Malabar Hill Reservoir, the repairs to the Bhandarwada Water Works, fencing work at Chinchpokli, and construction of urinals and latrines at ditto; the amount to be met out of savings on the grants for these works."

Resolved : "That, with reference to their resolution
No. 13702. No. 13629, dated 16th instant, the Corporation be recommended to sanction the payment of Rs. 3,750 from surplus cash balance to meet the cost of insuring the Municipal Office building and its contents for Rs. 12,00,000 for a period of five years."

Resolved : "That a Sub-Committee, consisting of Mr.
No. 13703. Bhalchandra Krishna, Mr. Geary, Mr. Viegas, and Mr. Javerilal U. Yajnik, be appointed to consider and report on letter No. 26476, dated 8th instant, from the Commissioner, on the subject of the complaint from Mr. Narsingrao Syboo and other inhabitants of Kamathipura."

Resolved : "That the following be *recorded* :—Memo-
No. 13704. randum No. 27732, dated 21st instant, from the Commissioner, reporting the sale of 4 per

cent. Government paper for Rs. 2,00,000, belonging to the 35 Lakhs Various Sanitary Works Loan deposit account, on the evening of the 16th idem, for delivery on 28th ditto, at Rs. $105\frac{5}{16}$."

Resolved : "That the following be *recorded* :—Memo-
No. 13705. randum No. 27731, dated 21st instant, from the Commissioner, reporting the further sale of 4 per cent. Government paper for Rs. 1,00,000, belonging to the 35 Lakhs Various Sanitary Works Loan deposit account on the 17th idem, for delivery on the 18th ditto, at Rs. $105\frac{5}{16}$."

Resolved : "That the following be laid on the table :—
No. 13706. Letter, dated 16th instant, from Messrs. Ardasir Framjee Moos and Nanabhai R. Ranina, stating that they have audited the weekly statements of receipts and disbursements at the end of each week for the months of January and February last and compared them with the general and subsidiary ledgers and journals and found them correct. Forwarding summary and statements of their scrutiny of the accounts."

It was agreed that the consideration of the following be further postponed till next week :—

Memorandum from the Municipal Secretary, forwarding letter, dated 13th instant, from Messrs. Payne, Gilbert and Sayani, submitting a petition to the Corporation by Mr. Sittaram Luxumon, contractor for the Tansa Pipe Line from Ghatkopar to Kalachowki Road, on the subject of his claim for bonus for the early completion of the work.

Resolved : "That the following be *recorded* :—Memoran-
No. 13707. dum No. 27527, dated 18th instant, from the Commissioner, reporting that no house or portion of any house fell during the month of February 1893."

The following return was read and *recorded* :—

Return of fires at Nepean Sea Road, Mahim Bazaar,
No. 13708. and Telli Mohla, forwarded with the Commissioner's memorandum No. 26983, dated 13th March 1893.*

The following statement† was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 19th March 1893.

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* *See* Appendix C. † *See* Appendix B.

Resolved: "That, as applied for by the Commissioner, sanction be given, as a special case, to the admission of Mr. Govindram Dulubram (who is over 35 years of age) to the benefits of the Pension Fund, on his resigning the service of Government and being appointed architectural surveyor."

No. 13709.

BOMBAY, 29*th March* 1893.

AT the meeting of the Standing Committee held this day, there were present :—

COWASJEE HORMUSJEE, Esq., C.I.E., *Chairman*.
BHALCHANDRA KRISHNA BHATAWADEKAR, Esq., L.M.; GRATTAN GEARY, Esq.; HURKISONDAS NURROTUMDAS, Esq.; JAVERILAL UMIASHANKAR YAJNIK, Esq.; KAIKHOSRO N. KABRAJI, Esq.; K. M. SHROFF, Esq.; R. G. OXENHAM, Esq., M.A.; ACCACIO G. VIEGAS, Esq., L. M. & S.; COLONEL W. H. WILSON.
H. A. ACWORTH, Esq., I.C.S., Commissioner; the WATER ENGINEER; and the SECRETARY.

The minutes of the meeting held on the 22nd instant, were signed.

The seal of the Corporation was affixed to (1) counterpart of lease with the Secretary of State for India in Council for land on the Esplanade occupied by the Municipal hall, and (2) for road along the north and north-west of the building, and (3) to deed of contract with Messrs. Killick, Nixon & Co. for the supply of 150 tons of Bengal coal, and (4) ditto with Messrs. Amrita Babaji, Vachaghandy, Bhedwar & Co. for the supply of earth for 1893-94.

The seal was also affixed to two consolidated debentures of the Sanitary Works Loan of 1885, Nos. 3067/68 NN of Rs. 1,000 and Nos. 3071/74 NN of Rs. 2,000.

Resolved: "That, as applied for by the Commissioner, in his memorandum No. 28406, dated this day, sanction be given to the cutting off of water connections as per list submitted therewith."

No. 14097.

Resolved: "That, as applied for by the Commissioner, in his letter No. 27967, dated 24th instant, sanction be given to the expenditure of Rs. 3,030 for pay of establishment employed in supervising the construction of the Connaught and Sussex Roads and for contingent charges, and of Rs. 11,877 ditto in respect of the road over the Tansa main from Dadar to Matunga. These amounts to be debited to the 15 lakhs loan for the construction of roads in Agripada and elsewhere."

No. 14098.

Resolved : "That the application of Mr. Walton cannot
No. 14099. be entertained, the Solicitors to the Corporation having advised that retrospective effect cannot be given to the new Pension Rules."

Resolved : "That, as applied for by the Commissioner,
No. 14100. in his memorandum No. 27950, dated 24th instant, sanction be given to the transfer of Rs. 451-10-1, from savings in the grant for constructing new drain, Walkeshwar village, Budget grant for 1892-93, drainage department, to same budget, same head, item No. 6, to meet excess on the cost of making arrangements for flushing of storm water drains."

Resolved : "That, as applied for by the Commissioner,
No. 14101. in his memorandum No. 28075, dated 25th instant, and subject to the approval of the Corporation under section 133 (2) of the Municipal Act, sanction be given to the transfer of Rs. 706-11-11 from savings in the grant for earth for covering kutchra deposits, to Assessment and Collection Department, property and wheel tax establishment, section III, contingencies (printing), to meet excess consequent on the printing of a large number of forms and books."

Resolved : "That, as applied for by the Commissioner,
No. 14102. in his memorandum No. 28267, dated 28th instant, sanction be given to the transfer of Rs. 22-1-11 from savings in the grant for section II, labour, workshops and stores establishment, to same head, section V, contingencies and printing, to meet excess on the latter head, due to property taxes being charged to contingencies."

Resolved : "That the following be *recorded* :—Letter
No. 14103. No. 28160, dated 27th instant, from the Commissioner, stating that the work of erecting parapet girders on the top flange of the two main girders of the Ghatkopar bridge has been entrusted to Messrs. Richardson & Cruddas, in continuation of their contract for fitting wrought-iron strengthening clamps to the Tansa 48" pipes on the overbridge crossing the Railway line at Ghatkopar.

"That the said contract be varied accordingly, and that, under the terms of section 69 (*e*) of the Municipal Act, sanction be given to the further variation of the contract so as to allow of the time being extended to 30th June 1893."

No. 14104. *Resolved* : " That, as applied for by the Commissioner, in his letter No. 27758, dated 22nd instant, sanction be given to the payment of bills to Messrs. Sittaram Luxamon & Co., contractors for the pipe line from Ghatkopar to Bombay, for extra works at the rates marked × in the two statements submitted with the letter, as also to the payment of certain other items at contract rates, also included in the statements, and the whole aggregating, respectively, Rs. 3,995-15-6 and Rs. 11,717-14-3. The amount to be met out of the provision made in the revised Tansa estimate, sanctioned by the Corporation on 26th February last. That, under the terms of section 69 (*e*) of the Municipal Act, sanction be given to the variation of the said contract, whereby the contract time, which expired on 1st June 1892, may be extended to 31st October 1892. That sanction be further given to the waiving of the penalty clause of the contract, as the Engineer certifies that the delay has not caused any loss to the Municipality."

No. 14105. *Resolved* : " That, as applied for by the Commissioner, in his letter to the Secretary, No. 28174, dated 27th instant, and under the terms of No. 3 of the Municipal Pension Regulations, the Committee approve of Mr. Ardasir P. Cama, the present Municipal Medical Examiner, being appointed medical authority for the purpose referred to therein."

No. 14106. *Resolved* : " That the following be *recorded* :—Letter No. 27889, dated 23rd instant, from the Commissioner, reporting that he has sold the following rights for fishing for one year, ending 31st March 1894, *viz.*, (*a*) in Warli channel and sluices and tank in Mingut Mandli to Padma Bhudia for Rs. 455, and (*b*) at Dharavi sluices to Pedro Pasker for Rs. 25."*

No. 14107. *Resolved* : " That the following be *recorded* :—Memorandum No. 28287, dated 28th instant, from the Commissioner, reporting the sale of 4 per cent. Government Paper for Rs. 8,20,100 belonging to the 35 Lakhs Various Sanitary Works Loan deposit account, on the 23rd and 25th idem, for delivery on the 23rd and 27th of the same, at Rs. $105\frac{1}{16}$ and Rs. $105\frac{2}{16}$. Also reporting the further sale of 4 per cent. Government Paper

* The amounts realised last year were Rs. 475 and Rs. 30 respectively.

for Rs. 34,000 belonging to the 35 Lakhs Various Sanitary Works Loan deposit account for delivery on the 28th idem, at Rs. 105 1/16."

Resolved : "That the following be *recorded* :—

No. 14108. Memorandum No. 27742, dated 22nd instant, from the Commissioner, reporting, with reference to the resolution of the Committee, No. 4484, dated 3rd October 1888, the transfer of Rs. 1,00,000 from the surplus cash deposit account to the Municipal General Fund pass book on 17th instant."*

Resolved : "That, with reference to the petition of Messrs.

No. 14109. Sitaram Luxamon & Co., dated the 13th instant, the Standing Committee see no reason to make any further representation to the Corporation, as the Committee have authorised the Commissioner to make an offer of Rs. 4,500 to Messrs. Sitaram Luxamon in full satisfaction of all their demands on account of bonus in connection with their contract for the laying of the Tansa pipe line from Ghatkopar to Kalachowki Road."

The following return was read and *recorded* :—

Return of fires at Babula Tank Road, Haines Road,

No. 14110. Old Nagpada, Lower Colaba, Haines Road, and Victoria Bunder (Lower Colaba), forwarded with the Commissioner's memorandum No. 27629, dated 18th March 1893.†

The following statement ‡ was laid on the table :—

Statement of the height of water in the Vehar, Tulsi, Pawai and Tansa Lakes for the week ending 26th March 1893.

Considered the following :—

No. 1029 OF 1893.

GENERAL DEPARTMENT,

BOMBAY CASTLE, 25*th March* 1893.

RESOLUTION OF GOVERNMENT.

His Excellency the Governor in Council is pleased to re-appoint Mr. H. A. Acworth, I.C.S., to be Municipal Commissioner for the City of Bombay for a further term of 3 years on the expiry of his present term of office.

W. L. HARVEY,
Under Secretary to Government.

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* The Chief Accountant reports to the Commissioner that the balance standing to the above account after effecting the transfer is as under :—

In 5 per cent. Municipal Debenture for Rs.	24,42,500	= Rs.	24,42,500	0	0
„ 4 Do. do. do. „	27,000	= „	27,000	0	0
„ 4 Do. Government Paper „	4,33,000	= „	4,31,700	5	0
In Cash ... ... „			6,025	0	0
		Rs.	29,07,225	5	0

† *See* Appendix C. ‡ *See* Appendix B.

No. 28348 OF 29*th March* 1893.

Copy forwarded to the Municipal Secretary for the information of the Standing Committee and Corporation.

H. A. ACWORTH, Commissioner.

No. 14111. *Resolved* : "That the following be forwarded to the Corporation :—Government Resolution No. 1029, General Department, dated 25th instant, re-appointing H. A. Acworth, Esq., I.C.S., Municipal Commissioner for the City of Bombay for a further term of three years on the expiry of his present term of office."

No. 14112. *Resolved* : "That the Standing Committee sanction with reference to their resolution No. 13700, dated 22nd instant, the Commissioner's entering into a contract with Messrs. Walsh, Lovett & Co. for the supply of iron pipes, valves, fittings, &c., according to the rates shown below :—

Double spigot	48″	...	...	...	Rs.	92	a ton.
Do.	27″	...	...	...	„	84	„
Spigot and socket	24″	...	...	...	„	84	„
Double spigot	18″	...	...	...	„	84	„
Spigot and socket	12″	...	...	...	„	88	„
Do. do.	9″	...	...	...	„	92	„
Do. do.	6″	...	...	...	„	92	„
Do. do.	4″	...	...	...	„	94	„
Do. do.	3″	...	...	...	„	94	„
Double spigot	3″	...	...	...	„	94	„

No. 14113. *Resolved* : "That the following be circulated and brought on for consideration next week :—Letter No. 28266, dated 28th instant, from the Commissioner, forwarding supplementary list of irrecoverable bills, and requesting sanction to the writing off of the amount."

Considered letter No. 302, dated 27th instant, from the Chemical Analyser to Government, to the Commissioner, as under :—

SIR,—With reference to your No. 27192 of the 15th instant, I have the honour to state that I consider the relative quality of the Disinfectants forwarded therewith, to be represented by their numerical order, as follows (No. 1 representing the best) :—

No. 1 Treacher's Powder.
„ 2 Calvert's do.
„ 3 McDougall's do.
„ 4 Jeyes' do.

I have, &c.,
T. D. COLLIS BARRY, F.R.S.E., F.C.S., F.I.C.,
Surgeon-Captain, Chemical Analyser to Government.

Resolved: "That letter No. 302, dated 27th instant, from the Chemical Analyser, to the Municipal Commissioner, be *recorded*."

No. 14114.

Proposed by the Chairman, seconded by Hurkisondas Nurrotumdas, Esq.—

"That this being the last occasion on which Col. W. H. Wilson will attend as a member of the Standing Committee, his colleagues thereon desire to record their cordial appreciation of the valuable services rendered by him, and of the courteous and genial manner in which he has taken part in the proceedings of the Committee."

No. 14115.

Carried.

The question of the raising of the loan of Rs. 42,00,000 at 4 per cent. to provide for the paying off of the 4½ per cent. Tulsi Consolidated Loan was discussed, and the Secretary was directed to record the resolution now passed on the file of confidential papers.

No. 14116.

H. WYNFORD BARROW,
Municipal Secretary.

STANDING COMMITTEE OFFICE,
BOMBAY, *April* 1893.

Appendix A.

Health Officer's Report for the First Quarter of 1892.

THE abnormal seasonal conditions of the past season have been followed by the high mortality I anticipated last year. In the second quarterly report I wrote, " I apprehend that Small-pox will " be prevalent during the next cold weather."

Whenever the rainfall is scanty and there is scarcity, an enhanced mortality may be anticipated. There is a distinct relation between the rise and fall of food prices and the fluctuations of mortality. It will be observed from the table following, that while the incidence of mortality falls unequally by localities, it also falls unequally on classes. The chief excess of mortality is due to abnormal seasonal conditions, but there is also an excess due to insanitary conditions. Not only have we insanitary conditions in the localities, but in the classes.

The insanitary conditions amongst which the out-caste live are well indicated in a table which follows.

BOMBAY MUNICIPALITY.

SECTIONS.	JAINS.			BRAHMIN.			LINGAET.			BHATIA.			HINDOO OF OTHER CASTES.			HINDOO OUT-CASTE.			MUSSALMAN.		
	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of Population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.
Colaba—																					
Upper	24	..	..	87	..	..	..	..	..	9	..	..	1,062	8	30·13	772	6	31·08	267	2	29·96
Middle and Lower ..	186	..	..	191	..	..	45	1	88·88	18	1	222·22	9,048	65	28·73	793	6	30·26	991	5	20·18
Fort—																					
Southern ..	..	..	..	21	..	..	..	..	..	..	..	..	1,491	1	2·68	320	..	..	249	..	..
Northern ..	1,346	24	71·32	1,443	10	27·72	..	..	..	2,299	21	36·53	8,018	57	28·43	1,853	29	62·60	1,577	16	40·58
Esplanade.. ..	102	..	..	242	1	16·52	6	..	..	44	..	..	2,266	7	12·35	3,715	25	26·91	1,348	14	41·54
Mandvi	5,652	92	65·10	106	47	959·18	14	..	..	1,815	19	41·87	22,966	251	43·71	514	4	31·12	4,935	61	49·44
Chuckla	1,056	24	90·90	726	7	38·56	..	..	..	221	3	54·29	10,121	88	34·77	336	8	95·23	19,308	229	47·44
Gunerkhari ..	1,300	11	33·84	258	3	46·51	33	..	..	8	..	..	17,901	172	38·43	1,415	23	65·01	29,574	386	52·20
Dongri	951	..	..	247	1	16·19	2	..	..	..	..	..	23,789	284	47·75	1,275	28	87·84	3,104	15	19·32
Market	4,505	42	37·20	5,253	25	19·03	115	1	34·78	2,202	13	23·61	25,058	145	23·14	413	2	19·37	2,586	18	27·84
Dhobi Talav ..	581	11	75·73	3,675	21	22·85	13	..	..	982	8	32·58	16,759	140	33·39	1,735	32	73·77	856	16	74·76
Parnaswari.. ..	441	4	36·28	4,293	23	21·43	16	..	..	49	..	..	15,744	103	26·16	80	1	50·00	398	3	30·15
Bhuleshwar ..	1,558	52	133·50	4,950	22	17·77	6	..	..	66	2	121·21	18,571	95	20·46	910	16	70·32	11,316	132	46·65
Khara Talav ..	847	2	9·44	215	6	111·62	32	..	..	5	..	..	7,294	74	40·58	2,266	57	100·61	15,804	167	42·26
Kumbharwada ..	646	5	30·95	1,471	13	35·35	36	2	222·22	8	..	..	25,015	257	41·07	1,448	30	82·87	2,969	37	49·84
Khetwari	383	2	20·88	1,299	7	21·55	51	..	..	7	1	571·42	16,319	119	29·16	134	2	59·70	4,696	41	39·92
Girgaum	556	3	21·58	6803	58	35·13	47	..	..	26	1	153·84	17,319	158	36·49	141	5	141·84	702	5	28·49
Chawpatti	251	2	31·87	1,137	4	14·07	16	..	..	35	..	..	8,087	26	12·86	508	1	7·87	317	1	12·61
Walkeshwar ..	227	2	35·24	709	10	66·41	9	..	..	33	2	242·42	9,001	32	14·22	332	2	24·09	389	..	..
Mahalaxmi ..	214	1	18·69	601	5	33·27	4	..	..	25	..	..	13,054	67	20·53	258	2	30·93	687	2	11·64
Mazagaum ..	641	1	6·21	483	3	24·84	5	1	800·00	..	..	..	20,803	125	24·03	1,110	16	57·65	4,846	47	38·79
Tarwari	205	..	..	325	1	12·30	5	..	..	3	..	..	14,636	85	23·23	851	7	32·90	2,668	17	55·48
2nd Nagpada ..	171	1	23·39	100	1	40·00	13	..	..	9	..	..	2,861	41	57·32	2,091	24	45·91	12,756	176	55·19
Kamathipura ..	611	8	52·37	386	5	51·94	23	..	..	11	..	..	16,072	205	51·02	5,712	131	91·73	5,058	59	46·65
Tardeo	373	..	..	259	1	16·44	9	..	..	11	..	..	8,561	84	39·24	5,262	57	43·32	2,855	28	39·22
Byculla	844	8	37·91	455	4	35·16	62	..	..	..	..	..	29,525	315	29·12	4,826	78	64·64	8,967	80	35·68
1st Nagpada ..	125	1	32·00	628	4	25·07	180	1	22·22	..	..	..	7,772	88	45·29	138	4	115·94	1,698	19	47·70
Parel	476	2	16·80	598	4	26·75	14	1	285·71	..	..	..	22,003	275	49·99	2,223	34	61·17	1,579	17	43·06
Shiwri	59	1	67·79	101	..	..	..	..	..	..	..	..	5,256	35	26·64	42	5	476·19	352	5	56·81
Sion	227	..	..	651	..	..	16	..	..	..	..	..	12,779	32	10·02	781	17	86·73	2,290	6	10·15
Mahim	372	..	..	46	2	173·91	..	..	..	..	..	..	12,642	75	23·73	740	9	48·64	1,479	16	43·27
Worlee	202	..	..	877	..	..	12	..	..	5	..	..	17,747	104	23·44	2,006	11	20·90	1,903	7	14·71
Water Division ..	..	..	..	40	..	..	.	..	..	..	.	..	11,033	4	1·34	76	..	..	6,076	9	5·30
Non-resident and unknown ..	..	..	..	..	1	..	..	..	..	..	..	..	.	40	..	..	5	..	..	26	..

APPENDICES.

PARSEE.			JEW.			N. CHRISTIAN.			EURASIAN.			EUROPEAN.			NEGRO AFRICANS.			CHINESE.			OTHERS AND UNKNOWN.		
Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.	Population.	Deaths.	Annual rate of mortality per 1,000 of population.
53	..	..	4	..	..	282	2	28·36	39	..	..	1,733	5	11·54	2	1	2000·00	1	..	..	..	..	..
719	1	5·56	46	..	..	746	3	16·08	99	1	40·40	740	1	5·40	..	..	..	..	..	..	..	..	..
77	..	..	262	..	..	718	..	..	85	1	47·05	727	1	5·50	..	..	..	1	..	..	..	..	..
14,719	69	18·75	100	1	36·69	996	4	16·16	136	2	58·82	340	1	11·76	1	..	..	16	..	..	..	..	..
240	1	16·66	94	..	..	846	..	..	290	..	..	861	2	9·29	4	..	..	6	..	..	..	..	..
8	1	500·00	751	4	21·30	309	3	39·15	18	..	..	34	..	..	69	..	..	14	..	..	..	..	..
355	1	11·26	2	1	2000·00	44	..	..	8	..	..	19	..	..	..	2	..	1	..	..	..	..	..
111	1	36·03	1,027	8	31·15	657	9	54·79	124	2	64·51	36	..	..	3	9	12000·00	19	1	210·52	..	..	..
11	..	..	589	7	47·53	221	1	18·09	58	..	..	65	..	..	..	..	..	2	..	..	..	..	..
4,007	44	43·92	11	..	..	523	4	30·59	34	..	..	12	..	..	..	..	..	32	..	..	..	..	..
10,244	70	27·23	16	..	..	4,703	49	41·67	317	1	12·61	52	..	..	..	..	..	12	1	333·33	..	..	..
1,567	8	20·42	..	..	..	1,445	..	..	34	..	..	1	..	..	1	..	..	..	..	..	..	..	..
879	2	9·10	1	..	..	94	..	..	..	1	..	..	..	..	..	1	..	12	..	..	..	..	..
443	3	27·08	23	..	..	65	..	..	8	..	..	3	..	..	7	5	2857·14	23	..	..	..	..	..
484	1	8·26	11	..	..	99	..	..	17	..	..	3	..	..	..	..	..	2	..	..	..	..	..
4,924	29	23·55	18	..	..	674	6	35·60	154	..	..	154	1	25·97	1	..	..	..	..	..	..	..	..
333	3	96·03	..	..	..	1,117	6	21·48	130	2	61·53	25	..	..	..	..	..	..	..	..	..	..	..
645	3	18·60	7	..	..	454	5	44·05	35	..	..	20	..	..	..	..	..	..	..	..	..	..	..
1,093	9	32·03	30	..	..	700	1	5·71	25	..	..	433	1	9·23	..	..	..	..	..	..	..	..	..
1,352	2	5·91	18	..	..	540	2	14·81	31	..	..	229	..	..	1	..	..	..	..	..	..	..	..
1,541	5	12·98	37	..	..	2,804	18	25·67	883	7	31·71	486	1	8·23	..	..	..	1	..	..	..	..	..
427	..	..	263	5	76·04	819	10	48·84	306	3	39·21	788	3	15·22	1	..	..	1	..	..	..	..	..
59	..	..	303	3	39·60	237	..	..	71	1	56·33	50	..	..	44	3	272·72	3	..	..	..	..	..
146	1	27·39	185	..	..	769	14	72·82	111	..	..	95	..	..	..	..	..	25	..	..	..	..	..
525	..	..	134	..	..	562	5	35·58	213	1	16·46	182	4	87·91	3	1	1333·33	1	..	..	..	..	..
318	2	25·15	229	1	17·46	1,037	8	30·79	577	5	34·66	569	5	35·77	..	..	..	2	..	..	1	..	..
21	..	..	452	7	61·94	101	..	..	50	..	..	63	..	..	..	2	..	1	..	..	..	..	..
890	6	26·96	87	3	137·93	420	5	46·61	95	..	..	344	2	23·76	..	..	..	..	..	..	1	..	..
40	..	..	1	..	..	174	..	..	..	..	..	39	..	..	..	..	..	..	..	..	..	..	..
415	..	..	10	..	..	2,456	13	21·18	30	..	..	44	..	..	..	..	..	..	..	..	..	..	..
281	3	42·70	6	..	..	2,680	13	19·40	103	..	..	160	1	25·64	..	..	..	..	..	..	..	..	..
518	..	..	286	1	13·98	1,819	10	21·99	213	2	37·73	228	..	..	..	..	..	..	..	..	1	..	..
13	..	..	..	..	..	595	..	..	7	..	..	2,769	4	5·77	9	1	444·44	15	1	266·66	..	..	..
..	..	..	..	1	..	..	16	..	..	1	..	..	17	..	..	1	..	..	..	..	1	..	..

It will be observed that wherever those classes are densely collected, there is a high mortality amongst them. In the dense portions of the city they live under fearful overcrowding—in room and in building. In Kamathipura and in other districts where there are out-caste, the room crowding is very dense. The mortality amongst the Parsee community indicates that a population living under favorable conditions or prosperity may have generally a low rate of mortality. It has to be remembered that the total mortality does not always exactly indicate sanitary conditions. There may be a low total mortality and yet with unfavorable sanitary conditions, while there may be a high total mortality not dependent on local conditions and not so unfavorable as indicated by the mortality. In the table which follows it will be observed that there is a relation between the mortality by sections and the density of population and insanitary conditions. I have so often described the conditions which affect the mortality in Kamathipura, that I need not now describe them. It will be observed that Kamathipura is now one of the densely populated localities. A poor and crowded population live in a locality once raised from a state of submergence with garbage, yet at depths still garbage oozing and undecomposed.

Return showing the Sections of highest mortality in the First Quarter.

Sections.	Annual rate per 1,000 of Population.	Mean area for each person in sq. yards.
Kamathipura	57·93	10·96
2nd Nagpada	53·28	8·76
Mandvi	51·69	21·36
Parel	48·71	186·68
Umbarkhari	47·64	9·71
Khara Talav	46·45	7·45
1st Nagpada	45 27	12·86
Chakla	45·09	7·75
Dongri	44·33	45·57
Kumbharwada	42·84	6·92
Tardeo	38·14	58·33
Girgam	35·70	22·32

Here is a description of a drain in Nagpada from the Annual Report of 1881—a drain under many houses and even worse now than then:—"I would now draw attention to a most offensive and "loathsome drain which you inspected with me. The new Nag- "pada drain runs under two or three houses in Bellasis Junction "Road; it was cleaned as far as these houses, but, fearing to injure "their walls and foundations, the work had to cease near them, but "was resumed in the road. This drain was found to be in a most "filthy state; it has been well described as one of the worst drains, "in point of construction, in the whole City." What has been

done in the Nagpadas in the last twenty years? *Nothing.** The drains are getting worse, and our efforts to clean them only makes them worse, where there are trenches unmade for rain into which drainage flows, each cleaning makes them deeper, and the construction of new drains or the repair of old drains has been put off until a general drainage scheme may be sanctioned and until it has been brought into the Nagpadas. In the last Annual Report I wrote :—"In 2nd Nagpada, where we have "the greatest house crowding, as many as 67·18 persons col- "lected in—15 families to each house—each crowded dwelling, "we have a mortality from Phthisis more than twice the mortality "in Byculla, nearly twice the mortality in Parel, and more than "twice the average mortality in all the other sections of the City, "and a fatality from diseases of the Respiratory System twice the "fatality in the whole City. In 2nd Nagpada the pressure of "population is greater than in the most crowded and dense section "of London. The extreme pressure in London is 222 persons "to an acre, whereas in 2nd Nagpada it rises to 469."

There are a large number of bad insanitary drains, mere trenches, and insanitary and crowded dwellings in narrow lanes in Mandvi. For instance, in Cooly Wadi, there is a dense population over rain channels which have been covered. The very imperfection of these channels, the frequent obstruction to flow gives some safety, for it is necessary to open them often and to keep open gullies and trenches discharging into them. Whenever Cholera is prevalent, many cases occur in Cooly Wadi, and the incidence in this locality is heavy. The ventilation of this section is imperfect—roads east and west—to ventilate and give light are necessary. Less sanitary road-making has been done in this section and in the east of the Island than in any portions of the City.

The most memorable event of this quarter has been the introduction of water from Tansa. The water is excellent in quality and will probably be better than either Vehar or Tulsi. It contains less organic impurity and ought to be more easily filtered. I look with some apprehension on the future from the introduction of Tansa water. It must be remembered that a little more than half the Island has no drains, that all the refuse of the City is deposited in a depression midway in the Island, under conditions which cannot now be considered safe. Formerly the refuse was deposited and cultivated each year, now from too little space refuse has to be placed on refuse—in putrefaction. If large quantities of water are discharged on to the ground where there are no drains, the effect must be dampness and water-logging of the soil. I therefore look with great apprehension to the future unless that drains are constructed to carry the water away. In my opinion all attention should be fixed on the construction of drains, and, as I have before urged, the construction of all house connections abandoned. In

* Note by the Municipal Commissioner—Plans and estimates for the sewerage of Nagpada are now under revision of the Executive Engineer.

1888 I wrote :—" Unless that channels are constructed where towns " are growing in Parel, Sewri and Mahim, the northern district " of the Island, there will be fearful nuisances. I think it would " be better to abandon house connections for the present, and " expend the money to be spent on house connections in laying " down sewer lines through the northern districts of the Island. The " need for drains or channels of any kind in one half of the Island " or, as commonly called, the City of Bombay, is emergent." Moreover, I do not think a system of house connections is suitable for dwellings in which each room is let out to tenants.

At the present moment a large number of connections in Khetwady and Kamathipura are obstructed, notwithstanding that Halalkores in the last Health Department Budget have been given to the Drain Cleaning Department. I am certain that for chalis the best outlet for room drainage is an open drain constructed in best cement and having water flowing down it. In former years I drew attention to what occurred at Dhobi Talao ; an excellent system of house connections was carried out, but as it was not renewed it disappeared. From the use of ashes and earth and straw in cleaning domestic utensils, and the throwing of refuse and food remains into "mories" and from windows into gullies, the traps connected with new sewers become very frequently obstructed and choked and overflow, and, as I wrote last year, "causing in many cases a nuisance more serious than " was the case when refuse water from the houses flowed on to " and over the old open paved gullies or channels." I complain of the delay in removing obstructions and nuisances, and I make many complaints in regard to that delay. There is an explanation no doubt that the Drainage Department and the Health Department look at nuisances in a different light. The Drainage Department look to house owners as the law directs. The Health Department look to the nuisances and not to the law—to the effect on the public health. The Health Department wish that nuisances be promptly removed. I admit that there must be great delay in removing any nuisances,—for the removal of which it is necessary to seek the assistance of the Magistrates. The Drainage Department look on a fault—obstruction in house connections—as they look on a fault in any work. The Health Department look on an obstruction as a serious nuisance which may affect the health or lives of people, and they therefore expect more promptness than perhaps is possible in dealing with obstructions in house connections. The only use of syphons seems to me to be to intercept—to do no more than intercept—solid matter and so cause obstruction. I suggested that the down-take pipes should discharge into catch-pits which would receive ashes, sand and other refuse before reaching the traps.

Exclusive of still-born, 7,194 deaths were registered during the quarter, being 1,170 more than in the preceding quarter and 1,488 more than in the corresponding quarter of the last year. The death-rate is equal to 35·01 per 1,000 of population.

The total enhanced mortality is chiefly due to Small-pox, Measles, Fevers and diseases of the Respiratory System, while the mortality from diseases of the Nervous System, Phthisis, Diarrhœa, Cholera, and diseases of the Generative System is less.

Examining the statistics according to place of birth, we find that 3,654 persons, including still-born, were born in Bombay; that 3,819 were born out of Bombay; and that the place of birth of 49 persons could not be ascertained. There must therefore have been some immigration.

The Fever mortality is 521 more than in the last quarter and 611 more than in the corresponding period of the last year, and 568 more than the average of the preceding five years. Of the total deaths from Fevers, 1,828 were referred to Remittent Fever, being 475 more than in the last quarter and 499 more than in the corresponding months of the past year; 309 were ascribed to simple continued Fever, being 58 more than in the previous quarter and 102 more than in the corresponding quarter of the last year; 96 were ascribed to Ague, being 8 less than in the last quarter, but 10 more than in the corresponding period of the last year, and 2 were referred to Enteric Fever. In all 2,235 deaths were ascribed to Fevers.

The mortality from Small-pox is 300 more than in the last quarter and 300 more than in the corresponding months of the last year. 321 deaths were registered.

On 23rd January 1892, I certified that the City was threatened with outbreaks of Small-pox, Measles and Influenza, and I recommended the opening of hospitals at Arthur Road and Grant Road.

From Measles 351 deaths were registered, being 269 more than in the last quarter and 211 more than in the corresponding quarter of the past year.

The mortality from Cholera is 21 less than in the past quarter and 2 less than in the corresponding period of the last year. There were 10 cases, of which 4 proved fatal.

The deaths from diseases of the Respiratory System were 215 more than in the last quarter and 201 more than in the corresponding period of the last year. 1,344 deaths were registered under the head of diseases of the Respiratory System; of these 805 were ascribed to Bronchitis, being 123 more than in the previous quarter and 108 more than in the corresponding quarter of the last year. 351 were referred to Pneumonia, being 91 more than in the last quarter and 65 more than in the corresponding quarter of the last year.

To diseases of the Digestive System, 527 deaths were ascribed, being 21 less than in the last quarter, but 66 more than in the corresponding quarter of the last year. Of the deaths from diseases of the Digestive System, 227 were referred to Diarrhœa, being 40 less than in the last quarter, but 23 more than in

the corresponding quarter of the last year. To Dysentery 134 were due, being 5 more than in the last quarter and 10 more than in the corresponding period of the last year. To all other diseases of the Digestive System, 166 deaths were referred, being 14 more than in the last quarter and 33 more than in the corresponding period of the last year.

The mortality from Phthisis is 32 less than in the last quarter, but 64 more than in the corresponding quarter of the last year.

From diseases of the Nervous System, 534 deaths were registered, being 49 less than in the previous quarter, but 22 more than in the corresponding quarter of the last year.

1 death from Hydrophobia was reported.

There were 29 deaths from Puerperal Fever.

From diseases of the Generative System, 49 deaths were registered, being 8 less than in the last quarter and 12 less than in the corresponding quarter of the last year.

To diseases of the Circulatory System, 41 deaths were referred, being 5 less than in the last quarter, but 1 more than in the corresponding quarter of the last year.

Ten deaths were registered under the head of Leprosy, being 3 less than in the past quarter and 30 less than in the corresponding quarter of the last year.

To the general affection Dropsy, 26 deaths were ascribed, being 2 less than in the last quarter, but 27 more than in the corresponding quarter of the last year.

24 deaths were registered under the head of diseases of the Urinary System, being 13 more than in the previous quarter and 8 more than in the corresponding quarter of the last year.

From diseases of the Organs of Locomotion and Cellular Tissue, 26 deaths were registered, being 1 more than in the last quarter and 8 more than in the corresponding quarter of the last year.

To diseases of the Cutaneous System, 3 deaths were due.

The number of premature births is 5 less than in the last quarter and 6 less than in the corresponding period of the last year.

The deaths from old age and debility were 6 more than in the last quarter and 67 more than in the corresponding quarter of the last year.

The deaths from accidents and violence amounted to 96, being 4 more than in the last quarter, but 8 less than in the corresponding quarter of the last year; 8 deaths were ascribed to poisoning, being 7 less than in the last quarter and 11 less than in the corresponding period of the last year; of the deaths from poisoning, 4 were suicidal and 4 accidental. The deaths from drowning were 6 less than in the last quarter, but 1 more than in the corresponding quarter of the last year, 5 were suicidal and 7 accidental; and in 3 instances the circumstances under which death took place were not known.

APPENDICES.

The rate of mortality amongst the chief races living in the City is shown below :—

	Per 1,000.
Hindus	32·32
Hindus, low-caste	59·95
Mussalmans	42·86
Parsees	22·33
Europeans	17·36

The infant mortality is 798 more than in the last quarter and 842 more than in the corresponding quarter of the last year; 3,220 children under 4 years of age died.

	No. of deaths.	Per 1,000 of Population.
Under 1 year	2,038	322·32
„ 2 years	745	220·69
„ 3 „	300	84·84
„ 4 „	137	42·37

At the burying and burning grounds of the City 4,841 bodies were buried, 2,396 burnt, and 285 conveyed to the Tower of Silence.

3,756 living—1,907 male, 1,849 female, and 328 still born births were registered, being 289 less than in the last quarter, but 213 more than in the corresponding quarter of the last year. The proportion of males to females by the last census was 170·60 to 100, but assuming that there were 100 males to 100 females, the birth-rate would be equal to 31·18.

T. S. WEIR,
Health Officer.

BOMBAY MUNICIPALITY.

RETURN SHOWING THE NUMBER OF DEATHS AND THE ANNUAL RATE OF MORTALITY DURING THE FIRST QUARTER OF 1891 AND 1892.

Wards.	Localities.	Number of Deaths, exclusive of Still-born, in 1891.	Annual Rate of Mortality per 1,000 of Population.	Number of Deaths, exclusive of Still-born, in 1892.	Annual Rate of Mortality per 1,000 of Population.
A	Upper Colaba	23	32·08	24	22·14
	Middle and Lower Colaba	82	22·99	84	24·66
	Fort, Southern	2	2·27	3	3·03
	„ Northern	190	22·46	234	28·49
	Esplanade	40	12·23	50	19·87
B	Mandvie	294	27·12	482	51·69
	Chukla	327	35·30	363	45·09
	Oomarkhari	457	33·44	625	47·64
	Dongree	200	24·03	336	44·33
C	Market	232	18·88	294	26·27
	Dhobi Talao	296	30·04	349	34·94
	Fanasvadi	130	17·74	142	23·59
	Bhuleshwar	261	27·30	323	33·67
	Khara Talao	255	35·55	314	46·45
	Kumbharwada	218	24·92	345	42·84
D	Khetwadi	167	22·14	208	28·87
	Girgaum	212	33·49	241	35·70
	Chaupati	46	16·76	42	14·59
	Walkeshwar	57	20·17	59	18·16
	Mahaluxmi	40	25·67	81	19·04
E	Mazagon	196	28·09	224	26·63
	Tarwadi	92	25·30	131	24·60
	2nd Nagpada	190	47·73	250	53·28
	Kamatipura	305	42·87	423	57·93
	Tardeo	168	31·13	181	38·14
	Byculla	376	56·03	407	34·34
	1st Nagpada	71	30·30	126	45 27
F	Parel	311	67·02	350	48·71
	Sewree	49	35·28	46	30·34
	Sion	72	16·70	68	13·87
G	Mahim	121	27·96	119	25·72
	Worli	104	28·45	136	21·33
Water Division		8	1·28	19	3·43
Non-resident and unknown		114	.....	115	.....
	Bombay...	5,706	28·17	7,194	35·01

All calculations of the quarter are based on the Census Population of 1891.

RETURN OF BIRTHS AND DEATHS FOR THE FIRST QUARTER OF 1892.

Months.	Births.	Deaths.										Barometer.	Temperature of Air.	Dew-point.	Humidity of Air.	Total fall of Rain at Colaba.
		Small-pox.	Measles.	Cholera.	Fevers.	Digestive System. Diarrhœa.	Digestive System. Dysentery.	Digestive System. All other Diseases under Digestive System.	All other Causes.	All Causes, except Still-born.	Annual Rate of Mortality per 1,000 of Population.					
January	1,358	46	67	1	752	83	55	62	1,839	2,405	35·11	29·929	76·7	65·0	·68	...
February	1,180	89	128	2	792	61	39	48	1,163	2,322	33·90	29·863	78·5	65·7	·66	...
March	1,218	186	156	1	691	83	40	56	1,254	2,467	36·02	29·812	80·1	70·8	·74	...
Total...	3,756	321	351	4	2,235	227	134	166	3,756	7,194	35·01	29·868	78·4	67·1	·69	...
Corresponding Quarter...	3,543	21	140	6	1,624	204	124	133	3,454	5,706	28·17	29·920	76·2	63·6	·66	·20

All calculations are based on the Census Population of 1891.

RETURN showing the Number of Children successfully and unsuccessfully Vaccinated, Number whose Vaccination has been postponed, and the Number certified to be insusceptible of Successful Vaccination during the First Quarter of 1892.

Quarter.	Number of Children successfully Vaccinated.			Number of Children unsuccessfully Vaccinated.	Number of Children whose Vaccination has been postponed.	Number of Children certified to be insusceptible of successful Vaccination.	Remarks.
	Under 1 year.	Under 14 years.	Total.				
1st Quarter of 1892...	5,502	1,519	7,021	44*	22	1†	* The unsuccessful result refers to "primary operations" only. † Insusceptible by previous small-pox.

Health Officer's Report for the Second Quarter of 1892.

THE mortality during the second quarter is less than in the previous quarter. The deaths, which in April had risen to 2,599, fell in June to 1,813, and the death-rate declined from 37·95 in April to 26·48 in June. Although this improvement in public health in the last month of the period is re-assuring, still the health of the City, as exhibited in the total mortality, cannot be considered to have been favorable. The mortality has decreased from diseases of the Respiratory System, Fevers, Small-pox, Measles and Phthisis, while it has increased from the following causes:—Diarrhœa, Diseases of the Nervous System, diseases of the Generative System and Debility.

I am glad to be able to record that you sanctioned the use of a steam-engine in flushing Gullies in Kamathipura and in other portions of the city during the hot season. I had been anxious for years to get a steam-engine for gully flushing but could not get one before. We have also now in the Health Department a hand-engine for flushing. Until the construction of the Tansa Lake it was not possible to give so much water to flush, but, now that it is possible, I would recommend that an engine be continually used in flushing gullies in the most crowded portions of the city; not only are there the gullies, but the sides of houses, to be washed clean.

Exclusive of still-born, 6,757 deaths were registered during the quarter, being 437 less than in the last quarter, but 829 more than in the corresponding quarter of the last year. The death-rate is equal to 32·89 calculated on the population of 1891.

Examining the statistics according to place of birth, we find that 3,786 persons, including still-born, were born in Bombay, that 3,286 were born outside of Bombay, and that the place of birth of 50 persons could not be ascertained.

The Fever mortality is 75 less than in the last quarter, but 440 more than in the corresponding quarter of the last year and 477 more than the average of the preceding five years. Of the total deaths from Fevers, 1,728 were referred to Remittent Fever, being 100 less than in the last quarter, but 323 more than in the corresponding quarter of the last year; 322 were ascribed to simple continued Fever, being 13 more than in the past quarter and 107 more than in the corresponding period of the last year; 107 were

ascribed to Ague, being 11 more than in the last quarter and 11 more than in the corresponding quarter of the last year, and 3 were referred to Enteric Fever. In all, 2,160 deaths were ascribed to Fevers.

The mortality from Small-pox is 121 less than in the preceding quarter, but 152 more than in the corresponding period of the past year.

From Measles 291 deaths were registered, being 60 less than in the last quarter and 38 less than in the corresponding quarter of the last year.

The mortality from Cholera is 35 more than in the last quarter and 36 more than in the corresponding quarter of the last year. There were 43 cases, of which 39 proved fatal.

The deaths from diseases of the Respiratory System were 307 less than in the last quarter, but 15 more than in the corresponding quarter of the past year. 1,037 deaths were registered under the head of diseases of the Respiratory System ; of these, 709 were ascribed to Bronchitis, being 96 less than in the last quarter, but 21 more than in the corresponding quarter of the past year. 181 were referred to Pneumonia, being 170 less than in the last quarter and 9 less than in the corresponding quarter of the last year.

From diseases of the Digestive System 578 deaths were registered, being 51 more than in the past quarter and 51 more than in the corresponding quarter of the last year. To Diarrhœa 282 deaths were referred, being 55 more than in the last quarter and 4 more than in the corresponding quarter of the past year. To Dysentery 138 deaths were ascribed, being 4 more than in the past quarter and 20 more than in the corresponding quarter of the last year. To all other diseases of the Digestive System 158 deaths were referred, being 8 less than in the last quarter, but 27 more than in the corresponding quarter of the last year.

To affections of the Nervous System 578 deaths were ascribed, being 44 more than in the last quarter, but 59 less than in the corresponding period of the last year.

2 deaths from Hydrophobia were reported.

From diseases of the Generative System 67 deaths were registered, being 18 more than in the last quarter and 11 more than in the corresponding quarter of the past year.

There were 30 deaths from Puerperal Fever.

To diseases of the Circulatory System 30 deaths were referred, being 11 less than in the last quarter and 7 less than in the corresponding period of the last year.

To the general affection Dropsy 27 deaths were ascribed, being 1 more than in the last quarter and 10 more than in the corresponding period of the last year.

17 deaths were registered under the head of diseases of the Urinary System, being 7 less than in the last quarter and 1 less than in the corresponding months of the past year.

From diseases of the Organs of Locomotion and Cellular Tissue 27 deaths were registered, being 1 more than in the preceding quarter and 11 more than in the corresponding period of the last year.

10 deaths were registered under the head of Leprosy, being 14 less than in the corresponding period of the last year.

To diseases of the Cutaneous System 7 deaths were due, being 4 more than in the last quarter, but 2 less than in the corresponding quarter of the last year.

The number of premature births is 2 less than in the last quarter and 6 less than in the corresponding quarter of the last year.

The deaths from old age and debility were 9 more than in the last quarter and 88 more than in the corresponding quarter of the last year.

The deaths from accidents and violence amounted to 98, being 2 more than in the last quarter and 16 more than in the corresponding months of the past year. 22 deaths were ascribed to poisoning, being 14 more than in the last quarter and 12 more than in the corresponing period of the last year. Of the deaths from poisoning, 10 were suicidal and 12 accidental; of the latter 3 were from snake-bite. The deaths from drowning were 5 more than in the last quarter, but 4 less than in the corresponding period of the last year; 5 were suicidal and 12 accidental, and in 3 instances the circumstances under which death took place were not known.

The rate of mortality amongst the chief races living in the City is shown below :—

	Per 1,000.
Hindus	29·64
Hindus, low-caste	56·49
Mussalman	41·88
Parsees	25·70
Europeans	24·44

The infant mortality is 136 more than in the preceding quarter and 270 more than in the corresponding quarter of the last year; 3,356 children under 4 years of age died.

	No. of deaths.	Per 1,000 of Population.
Under 1 year	2,226	352·06
„ 2 years	716	212·10
„ 3 „	257	72·68
„ 4 „	157	48·56

At the burying and burning grounds of the City 4,711 bodies were buried, 2,096 burnt, and 315 conveyed to the Towers of Silence.

3,548 living—1,783 male, 1,765 female—and 365 still-born births were registered, being 208 less than in the last quarter, and 231 less than in the corresponding quarter of the last year. The proportion of males to females by the last census was 170·60 to 100, but assuming that there were 100 males to 100 females, the birth-rate would be equal to 29·46.

T. S. WEIR,
Health Officer.

APPENDICES.

RETURN SHOWING THE NUMBER OF DEATHS AND THE ANNUAL RATE OF MORTALITY DURING THE SECOND QUARTER OF 1891 AND 1892.

Wards.	Localities.	Number of Deaths, exclusive of Still-born, in 1891.	Annual Rate of Mortality per 1,000 of Population.	Number of Deaths, exclusive of Still-born, in 1892.	Annual Rate of Mortality per 1,000 of Population.
A	Upper Colaba	24	33·48	17	15·68
	Middle and Lower Colaba	74	20·75	99	29·07
	Fort, Southern	3	3·41	8	8·09
	,, Northern	238	28·14	259	31·54
	Esplanade	50	15·29	69	27·42
B	Mandvie	315	29·77	456	27·45
	Chukla	323	34·87	332	41·24
	Oomarkhari	525	38·42	568	43·30
	Dongree	217	26·07	276	36·41
C	Market	246	20·02	290	25·92
	Dhobi Talao	301	30·55	324	32·94
	Fanasvadi	115	19·81	148	24·59
	Bhuleshwar	282	29·60	312	32·53
	Khara Talao	271	37·78	300	44·38
	Kumbharwada	243	27·77	317	39·36
D	Khetwadi	177	24·05	207	28·73
	Girgaum	221	34·91	211	31·26
	Chaupati	39	14·21	57	19·80
	Walkeshwar	59	20·87	59	18·16
	Mahaluxmi	68	43·64	57	13·40
E	Mazagon	190	27·23	208	24·73
	Tarwadi	98	26·95	116	21·78
	2nd Nagpada	205	51·50	219	46·67
	Kamatipura	299	42·03	346	47·39
	Tardeo	153	30·17	197	41·51
	Byculla	365	54·39	404	34·09
	1st Nagpada	89	37·98	129	46·34
F	Parel	324	69·82	328	45·65
	Sewree	35	25·20	47	31·00
	Sion	85	19·72	94	19·18
G	Mahim	101	23·34	113	24·42
	Worli	77	21·06	80	12·55
Water Division		3	·48	20	3·61
Non-resident and unknown		113	.....	90	.....
	Bombay...	5,928	*28·88	6,757	32·89

* This calculation is based on the approximate Census Returns of 1891.

RETURN OF BIRTHS AND DEATHS FOR THE SECOND QUARTER OF 1892.

MONTHS.	Births.	Deaths.											Barometer.	Temperature of Air.	Dew-point.	Humidity of Air.	Total fall of Rain at Colaba.
		Small-pox.	Measles.	Cholera.	Fevers.	Digestive System.			All other Causes.	All Causes, except Still-born.	Annual Rate of Mortality per 1,000 of Population.						
						Diarrhœa.	Dysentery.	All other Diseases under Digestive System.									
April	1,208	111	154	10	892	101	53	55	1,223	2,599	37·95		29·761	85·9	76·1	·78	...
May	1,126	61	103	17	747	94	48	53	1,222	2,345	34·24		·754	86·6	75·3	·70	·11
June	1,214	28	34	12	521	87	37	50	1,044	1,813	26·48		·660	82·9	77·2	·88	13·30
Total...	3,548	200	291	39	2,160	282	138	158	3,489	6,757	32·89		29·725	85·1	76·2	·75	13·41
Corresponding Quarter...	3,779	48	329	8	1,720	278	118	131	3,301	5,928	*28·88		29·780	84·1	75·1	·75	13·99

* This calculation is based on the approximate Census Returns of 1891.

RETURN showing the Number of Children successfully and unsuccessfully Vaccinated, Number whose Vaccination has been postponed, and the Number insusceptible of Successful Vaccination during the Second Quarter of 1892.

Quarter.	Number of Children successfully Vaccinated.			Number of Children unsuccessfully Vaccinated.	Number of Children whose Vaccination has been postponed.	Number of Children certified to be insusceptible of successful Vaccination.	Remarks.
	Under 1 year.	Under 14 years.	Total.				
2nd Quarter of 1892...	3,450	845	4,295	87*	48	1†	* The unsuccessful result refers to "primary operations" only. † Insusceptible by previous small-pox.

Health Officer's Report for the Third Quarter of 1892.

ALTHOUGH the mortality is higher than in the corresponding season of the last year, it is less than in the last quarter. Compared with the three months before, the mortality from Fevers, Measles, and Small-pox is less.

Exclusive of still-born, 6,670 deaths were registered, being 87 less than in the last quarter, but 481 more than in the corresponding quarter of the past year. The death-rate is equal to 32·46 per 1,000 of population calculated on the census of 1891.

There is now a larger supply of water, but I look with apprehension to the future from a larger supply of water. There are districts on which over 60 gallons of water to each individual is poured, but which have no drains. The result must be pollution and unwholesomeness. We see in every part of the city where there are not drains—damp ground, or pools of water. If more water is taken into the city than is taken out of it, the result must be dampness, pollution and unwholesomeness. Such must be the effects. In chalis occupied by some classes who wash their clothes inside the chalis, the floors near the water pipes are splashed and wet. Looking at the wetness inside these chalis, I am exceedingly doubtful of the advantage of allowing water pipes inside the dwellings of the poor, for not only are there water pipes on the ground floors, but there are water pipes on each floor, around which there is constant washing of persons and of clothes. It will, in order to preserve the public health, have to be considered whether the supply of water to districts having no drains should not to be reduced.* "

Examining the statistics according to place of birth, we find that 3,524 persons, including still-born, were born in Bombay, that 3,516 were born out of Bombay, and that the place of birth of 55 persons could not be ascertained.

The Fever mortality is 304 less than in the preceding quarter, but 75 more than in the corresponding quarter of the last year, and also 210 more than the average of the preceding five years. Of the total deaths from Fevers, 1,492 were referred to Remittent Fever, being 236 less than in the last quarter, but 50 more than in the corresponding quarter of the last year; 255 deaths were ascribed to simple continued Fever, being 67 less than in the past quarter, but 18 more than in the corresponding period of the last year; 100 were ascribed to Ague, being 7 less than in the last quarter and 4 more than in the corresponding quarter of the last year; and 9 were referred to Enteric Fever; in all 1,856 deaths were ascribed to Fevers.

* *Note.*—I concur generally with the Health Officer. Extensive proposals for sewers have been made in the Budget for 1893-94.

H. A. A.

The mortality from Small-pox is 181 less than in the last quarter and 1 more than in the corresponding months of the past year.

From Measles 55 deaths were registered, being 236 less than in the last quarter and 8 less than in the corresponding period of the last year.

The mortality from Cholera is 47 more than in the last quarter, but 44 less than in the corresponding period of the last year. There were 110 cases, of which 86 proved fatal.

The deaths from diseases of the Respiratory System were 39 more than in the last quarter, but 9 less than in the corresponding months of the past year. 1,076 deaths were registered under the head of diseases of the Respiratory System. Of these, 690 were ascribed to Bronchitis, being 19 less than in the last quarter and 24 less than in the corresponding quarter of the last year; 229 to Pneumonia, being 48 more than in the preceding quarter and 1 more than in the corresponding quarter of the last year.

To diseases of the Digestive System 747 deaths were ascribed, being 169 more than in the last quarter and 224 more than in the corresponding quarter of the past year. Of the deaths from diseases of the Digestive System, 382 were ascribed to Diarrhœa, being 100 more than in the last quarter and 103 more than in the corresponding quarter of the past year. 219 were referred to Dysentery, being 81 more than in the last quarter and 118 more than in the corresponding period of the past year; and to all other diseases of the Digestive System 146 deaths were referred.

From diseases of the Nervous System 632 deaths were registered, being 54 more than in the last quarter, but 83 less than in the corresponding period of the past year.

No death from Hydrophobia was registered.

There were 34 deaths from Puerperal Fever.

The mortality from Phthisis is 169 more than in the last quarter and 174 more than in the corresponding quarter of the past year.

To diseases of the Circulatory System 37 deaths were referred, being 7 more than in the last quarter.

From diseases of the Generative System 82 deaths were registered, being 15 more than in the past quarter and 17 more than in the corresponding quarter of the past year.

9 deaths were registered under the head of Leprosy, being 1 less than in the last quarter and 20 less than in the corresponding period of the past year.

To the general affection Dropsy 31 deaths were ascribed, being 4 more than in the last quarter and 6 more than in the corresponding quarter of the last year.

Nineteen deaths were registered under the head of diseases of the Urinary System, being 2 more than in the last quarter, but 1 less than in the corresponding period of the last year.

From diseases of the organs of Locomotion and Cellular Tissue 16 deaths were registered, being 11 less than in the last quarter and 8 less than in the corresponding quarter of the last year.

To diseases of the Cutaneous System 11 deaths were due, being

4 more than in the last quarter and 1 more than in the corresponding period of the past year.

The number of premature births is 4 less than in the corresponding quarter of the past year.

The deaths from old age and debility were 101 more than in the last quarter and 102 more than in the corresponding quarter of the past year.

The deaths from accidents and violence amounted to 97, being 1 less than in the last quarter, but 14 more than in the corresponding quarter of the last year. 13 deaths were ascribed to poisoning, being 9 less than in the last quarter and 1 less than in the corresponding quarter of the past year. Of the deaths from poisoning, 9 were suicidal, 2 accidental, and in two instances the circumstances under which the persons were poisoned were not known. The deaths from drowning were 10 more than in the last quarter and 2 more than in the corresponding period of the past year,—17 were suicidal, 6 accidental, and in 7 instances the circumstances under which death took place were not known.

The rate of mortality amongst the chief races living in the city is shown below :—

	Per 1,000.
Hindus	28·97
Hindus, low-caste	50·56
Mussalman	41·10
Parsees	26·46
Europeans	27·98

The infant mortality is 556 less than in the last quarter and 107 less than in the corresponding period of the last year. 2,800 children under 4 years of age died.

	No. of deaths.	Per 1,000.
Under 1 year	1,967	311·09
„ 2 years	536	155·07
„ 3 „	202	57·13
„ 4 „	95	29·38

At the burying and burning grounds of the city 4,499 bodies were buried, 2,257 burnt and 339 conveyed to the Towers of Silence.

3,906 living (2,068 male, 1,838 female) and 425 still-born births were registered being 358 more than in the last quarter, but 234 less than in the corresponding quarter of the last year. The proportion of males to females by the last census was 170·60 to 100, but assuming that there were 100 males to 100 females, the birth-rate would be equal to 32·43.

T. S. WEIR,
Health Officer.

BOMBAY MUNICIPALITY.

RETURN SHOWING THE NUMBER OF DEATHS AND THE ANNUAL RATE OF MORTALITY DURING THE THIRD QUARTERS OF 1891 AND 1892.

Wards.	Localities.	Number of Deaths, exclusive of Still-born, in 1891.	Annual Rate of Mortality per 1,000 of Population.	Number of Deaths, exclusive of Still-born, in 1892.	Annual Rate of Mortality per 1,000 of Population.
A	Upper Colaba	21	29·29	40	36·90
	Middle and Lower Colaba	63	17·66	82	24·07
	Fort, Southern	7	7·96	14	14·17
	,, Northern	228	26·95	294	35·80
	Esplanade	49	14·98	38	15·10
B	Mandvie	357	33·71	333	35·71
	Chukla	298	32·17	294	36·52
	Oomarkhari	473	34·61	529	40·33
	Dongree	183	21·98	223	29·42
C	Market	300	24·42	282	25·20
	Dhobi Talao	321	32·58	303	30·34
	Fanasvadi	144	24·80	123	20·44
	Bhuleshwar	313	32·85	291	30·34
	Khara Talao	276	38·47	275	40·68
	Kumbharwada	278	31·78	284	35·26
D	Khetwadi	184	25·00	199	27·62
	Girgaum	218	34·44	233	30·81
	Chaupati	51	18·58	66	22·93
	Walkeshwar	50	17·69	59	18·16
	Mahaluxmi	65	41·72	71	16·69
E	Mazagon	249	35·69	301	35·79
	Tarwadi	112	30·80	137	25·73
	2nd Nagpada	205	51·50	191	40·70
	Kamatipura	324	45·54	297	40·68
	Tardeo	147	21·07	209	44·04
	Byculla	331	49·32	390	32·90
	1st Nagpada	98	41·82	97	34·85
F	Parel	322	69·34	417	58·03
	Sewree	38	27·36	71	46·84
	Sion	78	18·10	133	27·14
G	Mahim	152	35·12	144	31·12
	Worli	100	27·35	120	18·86
Water Division		34	5·46	7	1·26
Non-resident and unknown		120	.....	123	.....
	Total...	6,189	30·12	6,670	32·46

RETURN OF BIRTHS AND DEATHS FOR THE THIRD QUARTER OF 1892.

Months.	Births.	Deaths.										Barometer.	Temperature of Air.	Dew-point.	Humidity of Air.	Total fall of Rain at Colaba.
		Small-pox.	Measles.	Cholera.	Fevers.	Digestive System. Diarrhœa.	Dysentery.	All other Diseases under Digestive System.	All other Causes.	All Causes, except Still-born.	Annual Rate of Mortality per 1,000 of Population.					
July	1,331	14	35	26	681	128	72	38	1,238	2,232	32·59	29·757	81·7	76·8	·85	23·86
August	1,262	8	17	30	605	142	86	51	1,363	2,297	33·54	·694	79·4	75·5	·88	36·56
September	1,313	2	8	30	570	112	61	57	1,306	2,141	31·26	·741	79·2	74·9	·87	19·73
Total	3,906	19	55	86	1,856	382	219	146	3,907	6,670	32·46	29·730	80·1	75·7	·86	79·15
Corresponding Quarter	4,140	18	63	130	1,781	279	101	143	3,674	6,189	30·12	29·733	80·7	75·8	·85	61·95

A 26

RETURN showing the Number of Children successfully and unsuccessfully Vaccinated, Number whose Vaccination has been postponed, and the Number certified to be insusceptible of Successful Vaccination during the Third Quarter of 1892.

Quarter.	Number of Children successfully Vaccinated.			Number of Children unsuccessfully Vaccinated.	Number of Children whose Vaccination has been postponed.	Number of Children certified to be insusceptible of successful Vaccination.	Remarks.
	Under 1 year.	Under 14 years.	Total.				
3rd Quarter of 1892...	3,080	504	3,584	44*	90	*Nil.*	* The unsuccessful result refers to "primary operations" only.

Health Officer's Report for the Fourth Quarter of 1892.

THE general health of the city has been favourable during the quarter. There has been a considerable decrease in the total number of deaths, as will be observed from the following table :—

		No. of Deaths.
1892.	1st Quarter	... 7,194
	2nd Quarter	... 6,757
	3rd Quarter	... 6,670
	4th Quarter	... 5,897

The chief decrease of mortality has been from Fevers, Diarrhœa, Dysentery, Cholera, Measles, Phthisis, &c.

Compared with the mortality in the previous 3 months, the mortality amongst Bombay born is 500 less, and amongst strangers 394 less. This may be seen from the following table :—

	3rd Quarter.	4th Quarter.
Born in Bombay	3,524	3,024
Born out of Bombay	3,516	3,122
Birth-place unknown	55	60

Exclusive of still-born, 5,897 deaths were registered, being 773 less than in the last quarter, and 127 less than in the corresponding quarter of the past year. The death-rate is equal to 28·70 per 1,000 of population calculated on the Census of 1891.

Examining the statistics according to place of birth, we find that 3,024 persons, including still-born, were born in Bombay, that 3,122 were born out of Bombay, and that the place of birth of 60 persons could not be ascertained.

The Fever mortality is 343 less than in the last quarter and 201 less than in the corresponding period of the last year, and also 62 less than the average of the preceding five years. Of the total deaths from Fevers, 1,252 were ascribed to Remittent Fever, being 240 less than in the last quarter and 101 less than in the corresponding period of the last year. 184 were ascribed to Simple Continued Fever, being 71 less than in the last quarter, and 67 less than in the corresponding three months of the past year. 73 were referred to Ague, being 27 less than in the past quarter, and 31 less than in the corresponding period of the past year. Only 4 were ascribed to Enteric Fever. In all 1,513 were ascribed to Fevers.

The mortality from Cholera is 46 less than in the preceding quarter, but 15 more than in the corresponding quarter of the last year. There were 57 cases, of which 40 proved fatal.

Only 1 death from Small-pox was registered during the quarter.

From Measles 12 deaths were registered, being 43 less than in the past quarter, and 70 less than in the corresponding months of the preceding year.

The deaths from diseases of the Respiratory System were 68 more than in the last quarter, and 15 more than in the corresponding period of the last year. 1,144 deaths were registered under the head of diseases of the Respiratory System. Of these, 717 were ascribed to Bronchitis, being 27 more than in the last quarter and 35 more than in the corresponding period of the last year; 262 to Pneumonia, being 33 more than in the last quarter, and 2 more than in the corresponding quarter of the past year.

To diseases of the Digestive System 575 deaths were ascribed, being 172 less than in the preceding quarter but 27 more than in the corresponding period of the last year; of the deaths from diseases of the Digestive System, 278 were referred to Diarrhœa, being 104 less than in the last quarter, but 11 more than in the corresponding quarter of the past year. To Dysentery 159 deaths were due, being 60 less than in the last quarter, but 30 more than in the corresponding months of the past year. To all other diseases of the Digestive System 138 deaths were referred, being 8 less than in the past quarter, and 14 less than in the corresponding period of the last year.

The mortality from Phthisis is 38 less than in the last quarter, but 79 more than in the corresponding period of the last year.

From diseases of the Nervous System, 584 deaths were registered, being 48 less than in the preceding quarter, but 1 more than in the corresponding months of the last year.

One death from Hydrophobia was registered.

There were 38 deaths from Puerperal Fever.

To diseases of the Circulatory System, 37 deaths were referred, being 9 less than in the corresponding period of the last year.

From diseases of the Generative System, 85 deaths were registered, being 3 more than in the past quarter, and 28 more than in the corresponding quarter of the last year.

There were 16 deaths registered under the head of Leprosy, being 7 more than in the last quarter, and 3 more than in the corresponding quarter of the last year.

To the general affection Dropsy, 31 deaths were ascribed, being 3 more than in the corresponding months of the past year.

From diseases of the Urinary System, 19 deaths were registered, being 8 more than in the corresponding period of the last year.

21 deaths were referred to the affections of the Organs of Locomotion and Cellular Tissue, being 5 more than in the preceding quarter, but 4 less than in the corresponding period of the past year.

There were 4 deaths registered under the head of the Cutaneous System, being 7 less than in the last quarter.

Eight premature births were registered.

The deaths from Old Age and Debility were 93 less than in the last quarter, but 23 more than in the corresponding quarter of the last year.

The deaths from Accidents and Violence amounted to 100, being 3 more than in the last quarter, and 8 more than in the corresponding period of the last year. 18 deaths were ascribed to Poisoning, being 5 more than in the last quarter and 3 more than in the corresponding quarter of the last year. Of the deaths from Poisoning, 7 were suicidal, 10 accidental, and in one instance the circumsances under which the death took place were not known. The deaths from Drowning were 6 less than in the last quarter, but 2 more than in the corresponding quarter of the last year; 13 were suicidal, 7 accidental, and in 4 instances the circumstances under which the deaths took place were not known.

The rate of mortality amongst the chief races living in the city is shown below :—

	Per 1,000.
Hindus	... 25·91
Hindus, low-caste	... 38·34
Musulman	... 39·17
Parsees	... 20·56
Europeans	... 10·98

The Infant mortality is 623 less than in the last quarter, and 309 less than in the corresponding quarter of the last year. 2,177 children under 4 years of age died.

	No. of deaths.	Per 1,000.
Under 1 year	1,537	243·09
„ 2 years	382	113·16
„ 3 „	162	45·81
„ 4 „	96	29·69

At the Burying and Burning Grounds of the city 3,798 bodies were buried, 2,140 burnt and 268 conveyed to the Towers of Silence.

4,275 living (2,287 male and 1,988 female) and 309 still-born births were registered, being 369 more than in the last quarter, and 230 more than in the corresponding period of the past year. The proportion of males to females by the last Census was 170·60 to 100, but assuming that there were 100 males to 100 females, the birth-rate would be equal to 35·48.

T. S. WEIR,
Health Officer.

BOMBAY MUNICIPALITY.

RETURN SHOWING THE NUMBER OF DEATHS AND THE ANNUAL RATE OF MORTALITY DURING THE FOURTH QUARTERS OF 1891 AND 1892.

Wards.	Localities.	Number of Deaths, exclusive of Still-born, in 1891.	Annual Rate of Mortality per 1,000 of Population.	Number of Deaths, exclusive of Still-born, in 1892.	Annual Rate of Mortality per 1,000 of Population.
A	Upper Colaba	34	31·37	30	27·68
	Middle and Lower Colaba	60	17·61	80	23·49
	Fort, Southern	3	3·03	9	9·11
	,, Northern	213	25·93	214	26·06
	Esplanade	36	14·30	38	15·10
B	Mandvie	374	40·11	281	30·13
	Chukla	285	30·40	315	39·13
	Oomarkhari	566	43·15	507	38·65
	Dongree	216	28·49	195	25·72
C	Market	264	23·59	276	24·66
	Dhobi Talao	255	25·53	279	27·93
	Fanasvadi	101	16·78	122	20·27
	Bhuleshwar	281	29·29	304	31·69
	Khara Talao	287	42·46	265	39·20
	Kumbharwada	278	34·52	257	31·91
D	Khetwadi	192	26·65	165	22·90
	Girgaum	195	28·88	197	29·18
	Chaupati	48	16·67	54	18·76
	Walkeshwar	65	20·01	48	14·78
	Mahaluxmi	51	11·79	52	12·22
E	Mazagon	209	24·85	222	26·39
	Tarwadi	108	20·28	103	19·34
	2nd Nagpada	196	41·77	173	36·87
	Kamatipura	369	50·54	283	38·76
	Tardeo	119	25·07	189	39·83
	Byculla	330	27·84	330	27·84
	1st Nagpada	91	32·69	98	35·21
F	Parel	277	38·55	269	37·43
	Sewree	29	19·13	56	36·94
	Sion	75	15·30	108	22·03
G	Mahim	141	30·47	124	26·80
	Worli	125	19·61	106	16·63
Water Division		22	3·97	13	2·34
Non-resident and unknown		129	.....	135	.....
	Bombay...	6,024	29·32	5,897	28·70

RETURN OF BIRTHS AND DEATHS FOR THE FOURTH QUARTER OF 1892.

Months.	Births.	Deaths.											Barometer.	Temperature of Air.	Dew-point.	Humidity of Air.	Total fall of Rain at Colaba.
		Small-pox.	Measles.	Cholera.	Fevers.	Digestive System.			All other Causes.	All Causes, except Still-born.	Annual Rate of Mortality per 1,000 of Population.						
						Diarrhœa.	Dysentery.	All other Diseases under Digestive System.									
October	1,369	...	4	27	481	92	40	47	1,358	2,049	29·92		29·796	82·0	75·7	·82	1·89
November	1,451	1	6	10	539	66	42	39	1,222	1,925	28·11		·898	79·2	66·1	·66	·67
December	1,455	...	2	8	498	120	77	52	1,176	1,923	28·08		·968	76·9	66·0	·70	...
Total...	4,275	1	12	40	1,518	278	159	138	3,756	5,897	28·70		29·887	79·3	69·2	·72	2·56
Corresponding Quarter...	4,045	21	82	25	1,714	267	129	152	3,634	6,024	29·32		29·905	80·4	67·7	·66	1·04

RETURN showing the Number of Children successfully and unsuccessfully Vaccinated, Number whose Vaccination has been postponed, and the Number certified to be insusceptible of Successful Vaccination during the Fourth Quarter of 1892.

Quarter.	Number of Children successfully Vaccinated.			Number of Children unsuccessfully Vaccinated.	Number of Children whose Vaccination has been postponed.	Number of Children certified to be insusceptible of successful Vaccination.	Remarks.
	Under 1 year.	Under 14 years.	Total.				
4th Quarter of 1892 ...	4,024	814	4,838	96*	66	*Nil.*	* The unsuccessful result refers to "primary operations" only.

Appendix B.

STATEMENT showing details of the Storage and Consumption of Water in Vehar Lake for the year 1892-93.

Date.			Rainfall for the Week.		Rainfall up to date for the Year.		Reduced Level of the Surface of the Water in the Lake, as per Gauge readings.		Height of water (above the lowest inlet to the Tower) available for supply.					
							At the commencement of the Week.	At the end of the Week.	At the commencement of the Week.		At the end of the Week.		When the Lake is full.	
			Inches	Cents.	Inches.	Cents.	Ft. T.H.D.	Ft. T.H.D.	Feet.	Cents.	Feet.	Cents.	Ft.	Ct.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3	April ...	1892	...	...	...	...	253·50	253·20	23	00	22	70	33	00
10	" ...	"	...	...	...	...	253·20	252·80	22	70	22	30	33	00
17	" ...	"	...	...	...	...	252·80	252·40	22	30	21	90	33	00
24	" ...	"	...	...	...	...	252·40	252·05	21	90	21	55	33	00
1	May ...	"	...	02	...	02	252·05	251·60	21	55	21	10	33	00
8	" ...	"	...	...	...	02	251·60	251·10	21	10	20	60	33	00
15	" ...	"	...	...	...	02	251·10	250·70	20	60	20	20	33	00
22	" ...	"	...	...	...	02	250·70	250·30	20	20	19	80	33	00
29	" ...	"	...	...	...	02	250·30	249·85	19	80	19	35	33	00
5	June ...	"	...	66	...	68	249·85	249·55	19	35	19	05	33	00
12	" ...	"	5	29	5	97	249·55	249·75	19	05	19	25	33	00
19	" ...	"	1	98	7	95	249·75	249·75	19	25*	19	25	33	00
26	" ...	"	4	25	12	20	249·75	249·90	19	25*	19	40	33	00
3	July ...	"	1	46	13	66	249·90	249·90	19	40*	19	40	33	00
10	" ...	"	11	25	24	91	249·90	251·65	19	40*	21	15	33	00
17	" ...	"	6	03	30	94	251·65	252·80	21	15*	22	30	33	00
24	" ...	"	5	56	36	50	252·80	254·05	22	30*	23	55	33	00
31	" ...	"	13	40	49	90	254·05	256·70	23	55*	26	20	33	00
7	August ...	"	4	54	54	44	256·70	257·70	26	20*	27	20	33	00
14	" ...	"	11	89	66	33	257·70	260·25	27	20*	29	75	33	00
21	" ...	"	9	69	76	02	260·25	262·60	29	75*	32	10	33	00
28	" ...	"	10	90	86	92	262·60	263·95	32	10*	33	45	33	00
4	September...	"	30	35	117	27	263·95	263·90	33	45*	33	40	33	00
11	" ...	"	2	42	119	69	263·90	263·15	33	40	32	65	33	00
18	" ...	"	2	62	122	31	263·15	263·40	32	65	32	90	33	00
25	" ...	"	2	92	125	23	263·40	263·80	32	90*	33	30	33	00
2	October ...	"	...	95	126	18	263·80	263·65	33	30*	33	15	33	00
9	" ...	"	...	33	126	51	263·65	263·45	33	15*	32	95	33	00
16	" ...	"	...	...	126	51	263·45	263·05	32	95	32	55	33	00
23	" ...	"	...	59	127	10	263·05	262·85	32	55*	32	35	33	00
30	" ...	"	1	52	128	62	262·85	262·80	32	35*	32	30	33	00
6	November ...	"	...	76	129	38	262·80	262·60	32	30*	32	10	33	00
13	" ...	"	...	...	129	38	262·60	262·25	32	10*	31	75	33	00
20	" ...	"	...	...	129	38	262·25	261·90	31	75*	31	40	33	00
27	" ...	"	...	...	129	38	261·90	261·60	31	40*	31	10	33	00
4	December ...	"	...	...	129	38	261·60	261·30	31	10*	30	80	33	00
11	" ...	"	...	...	129	38	261·30	261·05	30	80*	30	55	33	00
18	" ...	"	...	...	129	38	261·05	260·90	30	55*	30	40	33	00
25	" ...	"	...	...	129	38	260·90	260·65	30	40*	30	15	33	00
1	January ...	1893	...	...	129	38	260·65	260·45	30	15*	29	95	33	00
8	" ...	"	...	...	...	...	260·45	260·15	29	95*	29	65	33	00
15	" ...	"	...	...	...	...	260·15	259·90	29	65*	29	40	33	00
22	" ...	"	...	...	...	...	259·90	259·65	29	40*	29	15	33	00
29	" ...	"	...	...	...	...	259·65	259·40	29	15*	28	90	33	00
5	February ...	"	...	...	...	...	259·40	259·10	28	90*	28	60	33	00
12	" ...	"	...	...	...	...	259·10	258·80	28	60*	28	30	33	00
19	" ...	"	...	...	...	...	258·80	258·60	28	30*	28	10	33	00
26	" ...	"	...	...	...	...	258·60	258·30	28	10*	27	80	33	00
5	March ...	"	...	...	...	...	258·30	258·10	27	80*	27	60	33	00
12	" ...	"	...	...	...	...	258·10	257·85	27	60*	27	35	33	00
19	" ...	"	...	...	...	...	257·85	257·55	27	35*	27	05	33	00
26	" ...	"	...	...	...	...	257·55	257·25	27	05*	26	75	33	00

* Some water flowing in from Tansa Duct.

S. TOMLINSON, M. Inst. C. E.,
Water Engineer.

B 1

BOMBAY MUNICIPALITY.

STATEMENT showing details of the Storage and Consumption of Water in Tulsi Lake for the year 1892-93.

Date.			Rainfall for the Week.		Rainfall up to date for the Year.		Reduced Level of the Surface of the Water in the Lake, as per Gauge readings.		Height of water (above the lowest inlet to the Tower) available for supply.					
							At the commencement of the Week.	At the end of the Week.	At the commencement of the Week.		At the end of the Week.		When the Lake is full.	
			Inches.	Cents.	Inches.	Cents.	Ft. T.H.D.	Ft. T.H.D.	Feet.	Cents.	Feet.	Cents.	Ft.	Cts.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3	April ...	1892	...	...	...	...	442·30	441·70	42	94	42	84	57	14
10	,, ...	,,	...	...	...	...	441·70	441·05	42	34	41	69	57	14
17	,, ...	,,	...	...	...	...	441·05	440·45	41	69	41	09	57	14
24	,, ...	,,	...	...	...	...	440·45	439·80	41	09	40	44	57	14
1	May ...	,,	...	...	...	...	439·80	439·10	40	44	39	74	57	14
8	,, ...	,,	...	...	...	...	439·10	438·40	39	74	39	04	57	14
15	,, ...	,,	...	...	...	...	438·40	437·75	39	04	38	39	57	14
22	,, ...	,,	...	...	...	...	437·75	437·10	38	39	37	74	57	14
29	,, ...	,,	...	...	...	...	437·10	436·45	37	74	37	09	57	14
5	June ...	,,	...	93	...	93	436·45	435·80	37	09	36	44	57	14
12	,, ...	,,	6	41	7	34	435·80	435·80	36	44	36	44	57	14
19	,, ...	,,	3	45	10	79	435·80	435·50	36	44	36	14	57	14
26	,, ...	,,	3	96	14	75	435·50	435·20	36	14	35	84	57	14
3	July ...	,,	2	25	17	00	435·20	434·85	35	84	35	49	57	14
10	,, ...	,,	12	87	29	87	434·85	437·20	35	49	37	84	57	14
17	,, ...	,,	10	27	40	14	437·20	440·10	37	84	40	74	57	14
24	,, ...	,,	6	14	46	28	440·10	443·05	40	74	43	69	57	14
31	,, ...	,,	11	40	57	68	443·05	446·25	43	69	46	89	57	14
7	August ...	,,	6	04	63	72	446·25	449·80	46	89	50	44	57	14
14	,, ...	,,	12	88	76	60	449·80	455·30	50	44	55	94	57	14
21	,, ...	,,	6	80	83	40	455·30	456·50	55	94	57	14	57	14
28	,, ...	,,	10	81	94	21	456·50	457·00	57	14	57	64	57	14
4	September...	,,	35	02	129	23	457·00	457·20	57	64	57	84	57	14
11	,, ...	,,	3	21	132	44	457·20	456·50	57	84	57	14	57	14
18	,, ...	,,	3	64	136	08	456·50	456·80	57	14	57	44	57	14
25	,, ...	,,	2	81	138	89	456·80	456·60	57	44	57	24	57	14
2	October ...	,,	1	53	140	42	456·60	456·55	57	24	57	19	57	14
9	,, ...	,,	1	04	141	46	456·55	456·30	57	19	56	94	57	14
16	,, ...	,,	...	...	141	46	456·30	455·80	56	94	56	44	57	14
23	,, ...	,,	...	35	141	81	455·80	455·30	56	44	55	94	57	14
30	,, ...	,,	2	04	143	85	455·30	455·10	55	94	55	74	57	14
6	November...	,,	...	80	144	15	455·10	454·65	55	74	55	29	57	14
13	,, ...	,,	...	...	144	15	454·65	454·05	55	29	54	69	57	14
20	,, ...	,,	...	...	144	15	454·05	453·50	54	69	54	14	57	14
27	,, ...	,,	...	...	144	15	453·50	452·95	54	14	53	59	57	14
4	December...	,,	...	...	144	15	452·95	452·40	53	59	53	04	57	14
11	,, ...	,,	...	...	144	15	452·40	451·85	53	04	52	49	57	14
18	,, ...	,,	...	...	144	15	451·85	451·30	52	49	51	94	57	14
25	,, ...	,,	...	...	144	15	451·30	450·80	51	94	51	44	57	14
1	January ...	1893	...	...	144	15	450·80	450·25	51	44	50	89	57	14
8	,, ...	,,	...	...	...	...	450·25	449·75	50	89	50	39	57	14
15	,, ...	,,	...	...	...	...	449·75	449·15	50	39	49	79	57	14
22	,, ...	,,	...	...	...	...	449·15	448·60	49	79	49	24	57	14
29	,, ...	,,	...	...	...	...	448·60	448·05	49	24	48	69	57	14
5	February ...	,,	...	...	...	...	448·05	447·45	48	69	48	09	57	14
12	,, ...	,,	...	...	...	...	447·45	446·90	48	09	47	54	57	14
19	,, ...	,,	...	...	...	...	446·90	446·30	47	54	46	94	57	14
26	,, ...	,,	...	...	...	...	446·30	445·80	46	94	46	44	57	14
5	March ...	,,	...	...	...	...	445·80	445·20	46	44	45	84	57	14
12	,, ...	,,	...	...	...	...	445·20	444·65	45	84	45	29	57	14
19	,, ...	,,	...	...	...	...	444·65	444·05	45	29	44	69	57	14
26	,, ...	,,	...	...	...	...	444·05	443·45	44	69	44	09	57	14

S. TOMLINSON, M. Inst. C. E.,
Water Engineer.

APPENDICES.

STATEMENT showing details of the Storage and Consumption of Water in Pawai Lake for the year 1892-93.

Date.			Rainfall for the week.		Rainfall up to date for the Year.		Reduced Level of the Surface of the Water in the Lake, as per Gauge readings.		Height of water (above the lowest inlet to the Tower) available for supply.					
							At the commencement of the Week.	At the end of the Week.	At the commencement of the Week.		At the end of the Week.		When the Lake is full.	
			Inches.	Cents.	Inches.	Cents.	Ft. T.H.D.	Ft. T.H.D.	Feet.	Cents.	Feet.	Cents.	Ft.	Ct.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3	April ...	1892	...	...	...	...	178·35	178·20	13	35	13	20	25	00
10	„ ..	„	...	...	...	...	178·20	178·00	13	20	13	00	25	00
17	„ ...	„	...	...	...	...	178·00	177·70	13	00	12	70	25	00
24	„ ...	„	...	...	...	...	177·70	177·35	12	70	12	35	25	00
1	May ...	„	...	...	...	...	177·35	177·00	12	35	12	00	25	00
8	„ ...	„	...	...	...	...	177·00	176·65	12	00	11	65	25	00
15	„ ...	„	...	...	...	...	176·65	176·30	11	65	11	30	25	00
22	„ ...	„	...	...	...	...	176·30	176·10	11	30	11	10	25	00
29	„ ...	„	...	...	...	...	176·10	175·80	11	10	10	80	25	00
5	June ...	„	...	80	...	80	175·80	171·00	10	80	6	00	25	00
12	„ ...	„	5	80	6	60	171·00	170·00	6	00	5	00	25	00
19	„ ...	„	3	04	9	64	170·00	170·00	5	00	5	00	25	00
26	„ ...	„	3	14	12	78	170·00	172·90	5	00	7	90	25	00
3	July ...	„	1	21	13	99	172·90	174 35	7	90	9	35	25	00
10	„ ...	„	11	24	25	23	174·35	182·10	9	35	17	10	25	00
17	„ ...	„	5	92	31	15	182·10	185·80	17	10	20	80	25	00
24	„ ...	„	4	24	35	39	185·80	187·90	20	80	22	90	25	00
31	„ ...	„	13	17	48	56	187·90	190·05	22	90	25	05	25	00
7	August ...	„	4	39	52	95	190·05	190·00	25	05	25	00	25	00
14	„ ...	„	10	58	63	53	190·00	190·50	25	00	25	50	25	00
21	„ ...	„	9	51	73	04	190·50	190·05	25	50	25	05	25	00
28	„ ...	„	8	96	82	00	190·05	190·15	25	05	25	15	25	00
4	September...	„	29	98	111	98	190·15	190·10	25	15	25	10	25	00
11	„ ...	„	2	12	114	10	190·10	190·00	25	10	25	00	25	00
18	„ ...	„	1	86	115	96	190·00	190·15	25	00	25	15	25	00
25	„ ...	„	2	89	118	85	190·15	190·00	25	15	25	00	25	00
2	October ...	„	...	65	119	50	190·00	190·00	25	00	25	00	25	00
9	„ ...	„	...	39	119	89	190·00	190·00	25	00	25	00	25	00
16	„ ...	„	...	...	119	89	190·00	190·00	25	00	25	00	25	00
23	„ ...	„	...	35	120	24	190·00	189·95	25	00	24	95	25	00
30	„ ...	„	1	28	121	52	189·95	189·95	24	95	24	95	25	00
6	November...	„	...	46	121	98	189·95	189·95	24	95	24	95	25	00
13	„ ...	„	...	...	121	98	189·95	189·85	24	95	24	85	25	00
20	„ ...	„	...	...	121	98	189·85	189·75	24	85	24	75	25	00
27	„ ...	„	...	...	121	98	189·75	189·65	24	75	24	65	25	00
4	December ...	„	...	...	121	98	189·65	189·60	24	65	24	60	25	00
11	„ ...	„	.	...	121	98	189·60	189·50	24	60	24	50	25	00
18	„ ...	„	...	...	121	98	189·50	189·40	24	50	24	40	25	00
25	„ ...	„	...	...	121	98	189·40	189·30	24	40	24	30	25	00
1	January ...	1893	...	...	121	98	189·30	189·20	24	30	24	20	25	00
8	„ ...	„	...	...	...	...	189·20	189·15	24	20	24	15	25	00
15	„ ...	„	...	...	...	...	189·15	189·05	24	15	24	05	25	00
22	„ ...	„	...	...	...	...	189·05	188·95	24	05	23	95	25	00
29	„ ...	„	...	...	...	...	188·95	188·00	23	95	23	90	25	00
5	February ...	„	...	...	...	...	188·00	187·85	23	90	23	75	25	00
12	„ ...	„	...	...	...	...	187·75	188·55	23	75	23	25	25	00
19	„ ...	„	...	...	...	...	188·55	188·40	23	55	23	40	25	00
26	„ ...	„	...	...	...	...	188·40	188·30	23	40	23	80	25	00
5	March ...	„	...	...	...	...	188·30	188·20	23	30	23	20	25	00
12	„ ...	„	...	...	...	...	188·20	188·10	23	20	23	10	25	00
19	„ ...	„	...	...	...	...	188·10	188·00	23	10	23	00	25	00
26	„ ...	„	...	...	...	...	188·00	187·85	23	00	22	85	25	00

S. TOMLINSON. M. Inst. C. E.,
Water Engineer.

BOMBAY MUNICIPALITY.

STATEMENT showing details of the Storage and Consumption of Water in Tansa Lake for the year 1892-93.

Date.			Rainfall for the Week.		Rainfall up to date for the Year.		Reduced Level of the Surface of the Water in the Lake, as per Gauge readings.		Height of Water (above the lowest inlet to the Tower) available for supply.					
							At the commencement of the Week.	At the end of the Week.	At the commencement of the Week.		At the end of the Week.		When the Lake is full.	
			Inches.	Cents.	Inches.	Cents.	Ft. T.H.D.	Ft. T.H.D.	Feet.	Cents.	Feet.	Cents.	Ft.	Ct.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3	April ...	1892	...	...	...	...	401·89	401·64	21	89	21	64	25	00
10	" ...	"	...	...	...	...	401·64	401·38	21	64	21	38	25	00
17	" ...	"	...	...	...	...	401·38	401·11	21	38	21	11	25	00
24	" ...	"	...	...	...	...	401.11	400·86	21	11	20	86	25	00
1	May ...	"	...	...	...	...	400·86	400·60	20	86	20	60	25	00
8	" ...	"	...	...	...	...	400·60	400·32	20	60	20	32	25	00
15	" ...	"	...	...	...	...	400·32	400·02	20	32	20	02	25	00
22	" ...	"	...	...	...	...	400·02	399·74	20	02	19	74	25	00
29	" ...	"	...	...	...	...	399·74	399·45	19	74	19	45	25	00
5	June ...	"	...	...	...	...	399·45	399·28	19	45	19	28	25	00
12	" ...	"	1	99	3	43	399·28	399·26	19	28	19	26	25	00
19	" ...	"	3	10	6	53	399·26	399·34	19	26	19	34	25	00
26	" ...	"	1	39	7	92	399·34	399·44	19	34	19	44	25	00
3	July ...	"	1	32	9	24	399·44	399·45	19	44	19	45	25	00
10	" ...	"	15	64	24	88	399·45	401·75	19	45	21	75	25	00
17	" ...	"	12	14	37	02	401·75	405·30	21	75	25	30	25	00
24	" ...	"	4	36	41	38	405·30	405·05	25	80	25	05	25	00
31	" ...	"	6	32	47	70	405·05	405·19	25	05	25	18	25	00
7	August ...	"	6	17	53	87	405·19	405·22	25	19	25	22	25	00
14	" ...	"	6	48	60	35	405·22	405·19	25	22	25	19	25	00
21	" ...	"	5	81	66	16	405·19	405·09	25	19	25	09	25	00
28	" ...	"	13	65	79	81	405·09	406·30	25	09	26	30	25	00
4	September..	"	21	85	101	66	406·30	405·86	26	30	25	86	25	00
11	" ...	"	4	44	106	10	405·86	405·04	25	86	25	04	25	00
18	" ...	"	3	09	109	19	405·04	405·07	25	04	25	07	25	00
25	" ..	"	2	91	112	10	405·07	405·07	25	07	25	07	25	00
2	October ...	"	0	19	112	29	405·07	404·95	25	07	24	95	25	00
9	" ...	"	...	...	112	29	404·95	404·85	24	95	24	85	25	00
16	" ...	"	...	...	112	29	404·85	404·76	24	85	24	76	25	00
23	" ...	"	...	...	112	29	404·76	404·58	24	76	24	58	25	00
30	" ...	"	1	89	114	18	404·58	404·55	24	58	24	55	25	00
6	November...	"	0	37	114	15	404·55	404·39	24	55	24	39	25	00
13					114	55	404·39	404·11	24	39	24	11	25	00
20	" ...	"	...	...	114	55	404·11	403·82	24	11	23	82	25	00
27	" ...	"	...	...	114	55	403·82	403·57	23	82	23	57	25	00
4	December...	"	...	...	114	55	403·57	403·29	23	57	23	29	25	00
11	" ...	"	...	...	114	55	403·29	403·02	23	29	23	02	25	00
18	" ...	"	...	...	114	55	403·02	402·79	23	02	22	79	25	00
25	" ...	"	...	...	114	55	402·79	402·54	22	79	22	54	25	00
1	January ...	1893	...	...	114	55	402·54	402·29	22	54	22	29	25	00
8	" ...	"	...	...	...	...	402·29	402·03	22	29	22	03	25	00
15	" ...	"	...	...	...	...	402·03	401·77	22	03	21	77	25	00
22	" ...	"	...	...	...	...	401·77	401·51	21	77	21	51	25	00
29	" ...	"	...	...	...	...	405·51	401·26	21	51	21	26	25	00
5	February ...	"	...	...	...	...	401·26	400·99	21	26	20	99	25	00
12	" ...	"	...	...	...	...	400·99	400·76	20	99	20	76	25	00
19	" ...	"	...	...	...	...	400·76	400·49	20	76	20	49	25	00
26	" ...	"	...	...	...	...	400·49	400·22	20	49	20	22	25	00
5	March ...	"	...	...	...	...	400·22	399·98	20	22	19	98	25	00
12	" ...	"	...	...	...	...	399·98	399·71	19	98	19	71	25	00
19	" ...	"	...	...	...	...	399·71	399·43	19	71	19	43	25	00
26	" ...	"	...	...	...	...	399·43	399·14	19	43	19	14	25	00

S. TOMLINSON, M. Inst. C. E.,
Water Engineer.

Appendix C.

Return of Fires as required under Section 364 of the City of Bombay Municipal Act, 1888.

Date.	Locality.	Nature of property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	Remarks.
1892.							
20th March at 10-45 A.M.	Chikalwadi ...	A quantity of grass destroyed in stable.	Bhaisett & Co...	Rs. 2...	Careless smoking.	Water stored on the premises.	Extinguished by inmates. Insurance unknown.
22nd March at 12-30 P.M.	Government House Road, Parel.	A jowli hut destroyed by fire.	Mr. Ardesir Nusarwanji Wadia.	„ 50...	Unknown ...	Water used from well.	Do.
28th March at 10-10 A.M.	Victoria Bunder, Lower Colaba.	A small quantity of cotton damaged by fire and water on ground and first floors.	Assar Virjee ...	„ 20...	Stone in machinery.	Water stored on the premises.	Extinguished by press employés. Insured.
1st April at 1-30 P.M.	Cooperage	A tent used as a cook-room and contents damaged by fire.	Unknown ...	„ 20...	Spark from fire place.	Water used from main.	Extinguished by inmates. Insurance unknown.
3rd April at 3-15 A.M.	Chinchpokli Road (E. D. Sassoon Mill).	A quantity of stock damaged by fire and water on first floor.	E. D. Sassoon & Co.	„ 1,000...	Spontaneous combustion.	Water stored on premises.	Extinguished by employés with their donkey engine. Insured.

Date.	Locality.	Nature of property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	REMARKS.
1892. 14th April at 4-35 A.M.	Bapty Road ...	A corrugated iron shed, about 30×20 feet (used as store) and contents, burned out and fallen down. Building of two floors adjoining, about 20×15 feet (used as store) upper floor and contents burned out and roof off; ground floor and contents damaged by fire and water.	Jaffer Khan Mahomed.	Rs. 3,200...	Spontaneous combustion.	Water used at once from main.	Extinguished by firemen with 1 Brigade steamer and 2 hydrants. Not insured.
13th April at 5-30 P.M.	Colaba	A quantity of cotton damaged by fire on ground and first floors.	Cotton Owners' Association.	,, 200...	Stone in machinery.	Water stored on premises.	Extinguished by employés with buckets. Insured.

22nd April at 9-30 A.M.	Fergusson Road, Warli.	Four straw stacks *totally* destroyed by fire on open ground.	Ranu Mahadu...	Rs. 50...	Spark from fire.	Water used from main at once.	Extinguished by firemen with 1 Brigade steamer and stand pipe. Not insured.
23rd April at 4 A.M.	Dharavi Road, Mahim.	Roof of jowli hut slightly damaged by fire.	Kasim Metha ...	Re. 1...	Unknown ...	No water used...	Extinguished by inmates. Insurance unknown.
26th April at 7-45 P.M.	Breach Candy Road, Mahalakshmi.	A small quantity of straw rubbish burned on open ground.	Unknown ...	Nil ...	Do. ...	Water used from street service pipe.	Extinguished by firemen with buckets. Insurance unknown.
27th April at 8-25 P.M.	Ripon Road (Hindustan Mill).	A quantity of stock damaged by fire and water in spinning room on ground floor.	Thakarsey Mooljí & Co.	Rs. 1,300...	Do. ...	Water used from tank on premises.	Extinguished by mill employés with steam pumps. Insured.
2nd May at 3-25 P. M.	Malabar Point...	A thatched shed about 120×40 feet (used as stable) and contents nearly burned out; 3 tents and contents adjoining nearly destroyed.	The Government of Bombay.	„ 2,000...	Careless smoking.	Water used at once from main and tank.	Extinguished by firemen with 1 Brigade steamer and one manual. Not insured.
5th May at 10 A.M.	Parel Tank Road.	A jowli hut and contents destroyed.	Narayan Dabholker.	„ 35...	Careless use of fire.	Water stored for domestic purposes.	Extinguished by inmates with buckets. Not insured.

Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated. Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	REMARKS.
1892.							
6th May at 7 A.M.	Fergusson Road (Star of India Mill).	Contents in blow-room on 1st floor damaged by fire and water.	Messrs. K. M. Hiramanek & Co.	Rs. 200...	Stone in machinery.	Water stored on premises.	Extinguished by mill employés with buckets. Insured.
10th May at 10-30 A.M.	Malabar Hill ...	Roof of jowli hut slightly damaged by fire.	Unknown ...	Re. 1...	Careless smoking.	Domestic supply of water was used.	Extinguished by inmates. Not insured.
13th May at 2-10 A.M.	Kumbarvada 2nd Street.	Some wearing apparel burned on first floor.	Ahmed Ali ...	Rs. 2...	Do. ...	No water used...	Do. do.
15th May at 10-40 P.M.	Parel Road (Bhendy Bazaar).	Roof of outhouse (used as a smithy) damaged by fire and breakage.	Morlidhar Persondas.	,, 60...	A spark from foundry chimney.	Water used from service pipe on premises.	Extinguished by firemen with hand pump. Not insured.
16th May at 11-25 P.M.	Haines Road ...	A building of one floor, about 60 × 15 feet, and contents damaged by fire and water.	GunajiWermanji	,, 600...	Careless use of fire.	Water used at once from main and mill tank.	Extinguished by firemen with 1 Brigade hydrant and by employés of Ripon Mill with steam pump. Not insured.

19th May at 4-5 P.M.	Old Race Course.	A stack of straw severely damaged by fire and water on open ground.	Unknown ...	Rs. 150...	Light thrown down.	Water used at once from main and tank.	Extinguished by firemen with 1 Brigade hydrant and 1 private manual. Not insured.
20th May at 2 P. M.	Parel Cross Lane.	Two huts (used as stable) and contents nearly destroyed and a bullock burned to death.	Thrishnadas Morajidas.	„ 60...	Not known ...	Water used from main at once.	Extinguished by firemen with 1 Brigade hydrant. Not insured.
22nd May at 4 A.M.	Parel (Workshops).	About 1,000 tons of coal, 3 tiled sheds and 3 railway wagons severely damaged by fire.	B. B. & C. I. Railway Co.	„ 3,500...	Spontaneous combustion.	Water used from tank.	Extinguished by Railway employés with 1 steamer and 2 manuals. Insurance unknown.
23rd May at 11-30 A.M.	DeLisle Road ...	Two jowli huts and contents damaged by fire.	Unknown ...	„ 11...	Careless use of fire.	Do. ...	Extinguished by inmates. Not insured.
May 31st, at 12-45 A.M.	Gorab Road, Tank Bunder.	A jowli hut and contents destroyed.	Weerad Peerbhai	„ 20...	Do. ...	Water used at once from main.	Extinguished by firemen with 1 Brigade steamer. Not insured.

Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated damage.	Cause of fire.	Time at which the water was turned on to, and supplied at, Fire.	Remarks.
1892. June 1st, at 9-52 P.M.	Gogra Mohalla...	A small quantity of grass burned on ground-floor.	Bukus Yacoob...	Re. 1...	Light thrown down.	Water used from service pipe.	Extinguished by inmates and firemen with hand pump and buckets. Not insured.
June 2nd, at 9-42 A.M.	Memon Mohalla, 1st Street.	Roof slightly damaged by fire and breakage.	Hasan Dada ...	Rs. 25...	Careless use of oil lamp.	Domestic supply of water used.	Extinguished by inmates with buckets. Not insured.
4th June at 6-30 P.M.	Lady Jamsetji Road, Mahim.	A jowli hut and contents destroyed and 5 cocoanut trees severely damaged by fire.	Dhondiba Narayen.	„ 325...	Careless use of fire.	Water used from well.	Extinguished by firemen with Brigade manual. Not insured.
6th June at 6-32 A.M.	Abdul Rahimon Street.	Store-room on 1st floor and contents severely damaged by fire and water, upper part of house and contents slightly damaged by smoke.	Jamsetji Naoroji Kapadia.	„ 700..,	Unknown ...	Water used from main at once.	Extinguished by firemen with Brigade hydrant and 1 steamer. Not insured.

6th June at 8-55 P.M.	Dongri Street ...	A small quantity of grain damaged by fire and water on ground-floor.	Nandaji Kaloo.	Rs. 20...	Oil-lamp ...	Water used from service pipe.	Extinguished by inmates. Not insured.
12th June at 4-1 P. M.	Arthur Bunder..	About 700 bales of pressed and unpressed cotton (stored in a brick and corrugated iron shed of about 40×20 ft.) severely damaged by fire and water.	Messrs. Sauquet & Co.	„ 30,000...	Spontaneous combustion.	Water used from sea at once.	Extinguished by firemen with 2 Brigade steamers and Cotton Association's steamer. Insured.
13th June at 12-1 P. M.	Pedder Road ...	A cudjan hut about 20 × 20 ft. damaged by fire and breakage.	Hurry Narayen...	„ 7...	Careless use of fire.	Water used from service-pipe.	Extinguished by inmates with buckets. Insurance not known.
17th June at 3-1 A. M.	Dharavi Road, Mahim.	A jowli hut (used as a cow-shed) destroyed and a buffalo and 2 calves burnt to death.	Nuiggur Moali...	„ 147...	Do. ...	No water used...	Burnt out. Not insured.

Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	REMARKS.
1892.							
21st June at 11-45 A.M.	Chinch Bunder, Frere Road.	Three jowli sheds about 300 × 10 feet and contents nearly destroyed.	The Port Trust.	Rs. 800...	Not known ...	Water used from main at once.	Extinguished by firemen with 1 Brigade steamer and Port Trust steamer. Insurance not known.
27th June at 3-1 A.M.	Kennedy Bridge Road.	Roof slightly damaged by fire and heat.	Dairam Datheram.	„ 5...	Oil lamp ...	Water used from service pipe.	Extinguished by inmates with buckets. Insured.
8th July at 2-10 A.M.	Parel Cross Road.	Roof of shed (used as stable) slightly damaged by fire.	Narbutsing Peringsing.	„ 2...	Careless use of fire.	Water used from tank.	Extinguished by inmates with buckets. Not insured.
10th July at 9-28 A.M.	Motilal Petty Mill, Tardeo.	About 3 × 3ft. flooring slightly damaged by fire in engine-room on ground floor.	Sewlal Motilal...	„ 5...	Oil lamp upset	Water stored on premises.	Ditto by mill employés with private hydrant. Insured.
11th July at 4-30 P.M.	Modi Bunder ...	A stack of coal of about 700 tons damaged by fire.	The Port Trust..	Unknown...	Spontaneous combustion.	Water used from main at once.	Ditto by firemen with Brigade stand pipe. Insured.

12th July at 3-5 A.M.	Gilder Street ...	Seven *jowali* huts and contents nearly destroyed.	Ramstar Missar and others.	Rs. 216...	Careless smoking.	Water used from main at once.	Extinguished by firemen with Brigade standpipe. Not insured.
12th July at 9-30 P.M.	*Null* Bazar ...	A building of 1 floor about 40×30 ft. comprising 5 shops and contents nearly burned out, side fronts of buildings adjoining slightly damaged by fire, heat and water.	Narayandas Kaliandas.	„ 7,000...	Unknown ...	Do. ...	Ditto ditto with 1 Brigade steamer and 1 hydrant. Not insured.
15th July at 11-1 P.M.	Chinch Bunder Road.	A tiled shed about 30×60 feet and contents burned out and several goats burned to death, side front and roof of building adjoining damaged by fire and heat.	Baba Tar Mahomed.	„ 400...	Do. ...	Do. ...	Ditto ditto with 1 Brigade hydrant. Not insured.
17th July at 4-30 A.M.	Lady Jamsetji Road, Mahim.	Two jowli huts (used as cowsheds) and contents burned out.	Nathoo Walji ...	„ 29...	Careless use of fire.	Water used from well and main at once.	Extinguished by firemen with 1 Brigade manual. Not insured.

Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	REMARKS.
1892. 24th July at 2-45 P.M.	Memonwada, Old Nagpada.	A cotton mattress and about 2 × 2 feet of flooring damaged by fire on 3rd floor.	Vandravandas Purshotamdas.	Rs. 5...	Careless use of fire.	Domestic supply.	Extinguished by inmates. Insured.
25th July at 7-15 P.M.	Musjid Bundar.	A kerosine lamp destroyed on ground floor.	Lalji Pancham...	Re. 1...	Kerosine lamp exploding.	No water used...	Extinguished by inmates. Not insured.
2nd August at 6-1 p.m.	Sewri Road (China Mill).	A quantity of cotton dust burned in blow-room.	P. Hormarjee Wadia & Co.	Nil ...	Stone in machinery.	Water used from main and tank at once.	Extinguished by firemen with 1 Brigade steamer. Insured.
2nd August at 9-1 p.m.	Jackeria Musjid Road.	A wooden cot and a mattress damaged by fire on second floor.	Murbux Ramjan	Rs. 5...	Careless use of fire.	Domestic supply of water used.	Extinguished by inmates. Insurance unknown.
22nd Aug. at 1-1 p.m.	Lady Jamsetji Road, Mahim.	A jowli hut and contents nearly burned out.	Jivan Dhuroo...	,, 10...	Do. ...	Water used from tank.	Extinguished by inmates. Not insured.
25th Aug. at 8-30 p.m.	Mahalakshmi Road.	A jowli hut and contents damaged by fire.	Bapoo Nanaji ...	,, 5...	Do. ...	Water used from well.	Extinguished by inmates. Insurance unknown.

2nd Sept. at 5-1 P. M.	Coliwada Cross Road (Sewri).	A *jowli* hut and contents destroyed and a buffalo burned to death.	Biru Ram ...	Rs.	40...	Careless use of fire.	Water used from sea.	Extinguished by inmates. Not insured.
3rd Sept. at 9-30 A. M.	Bengalpura ...	A quantity of straw burned on ground floor.	Keshowji Poonja	Re.	1...	Careless smoking.	No water used...	Do. Insured.
Sept. 25th at 11-15 P.M.	Falkland Road .	Four jaoli huts and contents burnt out.	Ganoo Yessoo ...	Rs.	50...	Kerosine lamp upset.	Water used from main at once.	Extinguished by firemen with Brigade hydrant. Not insured.
9th Oct. at 1-1 A.M.	Memonwada Road.	A wicker basket burned on ground floor.	Hussan Murro...		Nil.	Careless use of lamp.	No water used...	Extinguished by inmates. Not insured.
9th Oct. at 6-30 P.M.	406, Duncan Road.	A small quantity of oil destroyed on ground floor.	Mr. Peters ...		Do.	Careless use of oil when cooking.	Do. ...	Do.
13th Oct. at 2-30 P.M.	Bellasis Road ...	A weather board slightly damaged by fire.	Valabdas Kisindas.	Rs.	2...	Spark from chimney.	Water stored on premises.	Extinguished by inmates. Insurance unknown.
14th Oct. at 11-1 A.M.	Arthur Road ...	A chawl of one floor about 140 × 40 feet and contents severely damaged by fire and most part of roof off.	Thakurdas Jagjivandas.	,,	5,000...	Spark from fire.	Water used from main at once.	Extinguished by firemen with 1 Brigade steamer and 1 hydrant. Not insured.

Date.	Locality.	Nature of property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, fire.	Remarks.
14th Oct. at 11-1 P.M.	Dharavi Road, Mahim.	A small jowli hut burned out.	Heerji Khooja...	Re. 1...	Careless use of oil lamp.	Water used from well.	Extinguished by inmates. Not insured.
15th Oct. at 1-50 P.M.	Girgam Back Road.	A tiled shed about 60×30 feet used as dwelling, nearly burned out.	Keshavji Jadowji.	Rs. 700...	Careless smoking.	Water used from main at once.	Extinguished by firemen with 1 Brigade steamer and 2 hydrants. Not insured.
Do.	Do.	Roof of chawl adjoining fire breakage.	Ramji Purshotam.		Do. ...	Do. ...	Extinguished by firemen with 1 Brigade steamer and 2 hydrants. Insured.
15th Oct. at 6-1 P.M.	Falkland Road .	About 2×2 feet of flooring slightly damaged by fire on ground floor.	Motichand Hirachand.	Nil.	Overheat of cooking stove.	Water stored on premises.	Extinguished by inmates. Not insured.
17th Oct. at 10-15 P.M.	Parel Road ...	Some matting damaged by fire on ground floor.	Barumia Jeetakar.	Re. 1...	Kerosine oil lamp upset.	Do. ...	Do.

18th Oct. at 11-30 A.M.	Abdool Rahiman Street.	A small quantity of pitch destroyed and a door damaged by fire on 1st floor.	Ali Mahomed ...	Rs.	30...	Pitch boiling over.	Water used from service pipe.	Extinguished by inmates. Not insured.
27th Oct. at 11-45 A.M.	Musjid Bandar Road.	A small quantity of sugar destroyed on ground floor.	Jusi Nusi Kasowji.	„	3...	Sugar boiling over.	Water stored on premises.	Extinguished by inmates; the building insured.
30th Oct. at 4-1 P.M.	Gowlee Mohla ...	Several sacks damaged by fire on 1st floor.	Jusub Noor Mahomed.	„	2...	Careless use of fire.	Do.	Do.; not insured.
31st Oct. at 12-30 A.M.	Dharavi Road, Mahim.	Roof of a jowli hut nearly destroyed.	Elli Bux Memon.	Re.	1...	Do. ...	Water used from sea.	Do. do.
3rd Nov. at 5-1 A.M.	Do. ...	A jowli hut damaged by fire.	Cassum Essa ...	Rs.	6...	Unknown ...	Do.	Do. do.
5th Nov. at 9-30 A.M.	Middle Pakhady, Warli.	A jowli hut nearly burned out.	Unknown ...	„	29...	Careless use of fire.	Water used from main at once.	Extinguished by Water Works employés with hydrant. Not insured.
8th Nov. at 4-40 P.M.	Chukla ...	Some matting burned on 2nd floor.	Nanji Canji ...	Re.	1...	Unknown ...	Water stored on premises.	Extinguished by inmates. Not insured.
10th Nov. at 10-44 P.M.	Parel Road ..	A jowli hut destroyed and roof of chawl adjoining damaged by fire and breakage.	Dr. Gopal Shivram.	Rs.	44...	Do.	Water used from main at once.	Extinguished by firemen with Brigade hydrant. Not insured.

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Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	REMARKS.
1892.							
12th Nov. at 11-1 A.M.	DeLisle Road, Parel.	A jowli hut and contents destroyed by fire.	Sitaram Koombar.	Rs. 5...	Careless use of fire.	Water used from tank.	Extinguished by inmates. Not insured.
12th Nov. at 8-15 P.M.	Sewree Road (Bombay National Mill).	A quantity of cotton waste damaged by fire.	Thackersi Narayanji & Co.	„ 125...	Spontaneous combustion.	Water stored on premises.	Extinguished by Mill employés with steam pump. Not insured.
13th Nov. at 12-30 P.M.	Walkeshwar Road (Government House Compound).	A jowli hut damaged by fire.	Bombay Government.	Re. 1...	Careless use of fire.	Water used from pipe.	Extinguished by inmates. Not insured.
13th Nov. at 12-1 A.M.	Victoria Bandar, Colaba.	A small quantity of grass and bamboos damaged by fire on ground floor.	Chuturmul Jaithamull.	„ 1...	Careless use of fire-place.	Water stored on premises.	Do. do.
15th Nov. at 9-55 P.M.	Chinchpokli (Hongkong Mill).	A quantity of cotton yarn and a wooden partition damaged by fire and water on ground floor.	Jairajbhoy, Albless & Co.	Rs. 100...	Spontaneous combustion.	Water used from tank.	Extinguished by firemen and Mill employés with buckets. Insured.

16th Nov. at 8-30 A.M.	Nagdevi Lane...	A quantity of loose jute damaged by fire on ground floor.	Bhajubhoy Kalidas.	Rs.	15...	Light thrown down.	Water used from service-pipe.	Extinguished by firemen and inmates with hand pump and buckets. Not insured.
22nd Nov. at 3-1 P.M.	Samuel Street, Khoja Mohla.	A mattress damaged by fire on first floor.	Gordhandas Goculdas.	Re.	1...	Light thrown down.	Water stored on premises.	Extinguished by inmates. Not insured.
22nd Nov. at 10-1 P.M.	Arthur Road ...	A quantity of building material destroyed by fire on third floor of Mill in course of construction.	Dhunjibhoy Petit.	Rs.	50...	Unknown ...	Water used from service pipe.	Extinguished by inmates. Insured.
25th Nov. at 11-45 A.M.	Lascars' Line, Lower Colaba	Side front and roof of tiled hut damaged by fire, contents by water.	Sheik Mahomed Goolam Mohidin.	,,	14...	Light thrown down.	Water stored on premises.	Extinguished by inmates. Not insured.
25th Nov. at 4-30 A.M.	Bhoewada Road, Parel.	A quantity of grass burned on public road.	Mr. Larikha Balka.	,,	3...	Careless use of oil-lamp.	Domestic supply.	Extinguished by inmates. Not insured.
28th Nov. at 12-30 P.M.	Haines Road ...	7 jowli huts and contents destroyed.	Mr. Sewlal Motilal.	,,	90...	Light thrown down.	Water used from main at once.	Extinguished by firemen with Brigade hydrant. Not insured.

Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	REMARKS.
1892. 1st Dec. at 11-1 A.M.	Ripon Road ...	Some bedding damaged by fire and water on 2nd floor.	Mr. Akbarshah.	Rs. 3...	Light thrown down.	Domestic supply.	Extinguished by inmates.
1st Dec. at 1-15 P.M.	Kandawadi Lane	A building of one floor about 40 × 30 feet (used as a stable) and contents nearly burned out and roof off; roof of chawl adjoining damaged by fire and heat.	Mr. Shankerrao Wani.	„ 1,000...	Unknown.....	Water used from main at once.	Extinguished by firemen with steamer and hydrant. Not insured.
4th Dec. at 5-30 P.M.	Bellasis Road ...	Roof of tiled shed (used as bakery) damaged by fire.	Mr. Issa Kalipa .	„ 10...	Spark from fire.	Domestic supply.	Extinguished by inmates.
5th Dec. at 12-30 A.M.	Chukla Street ...	Aquantity of waste paper burned and a wooden box damaged by fire on ground floor.	Mr. Noor Mahomed Nurani.	„ 5...	Light thrown down.	Do. ...	Do.

5th Dec. at 12-50 A.M.	Abdul Rahman Street.	A building of one floor about 40×30 feet and contents severely damaged by fire and most part of roof off; side fronts and roof of building adjoining slightly damaged by fire and heat.	Mr. Vanmali Jeeva.	Rs. 9,000...	Unknown ...	Water used from main at once.	Extinguished by firemen with steamer and hydrant. Building insured.
5th Dec. at 11-45 A.M.	Nepean Sea Road.	A building of one floor, about 50×30 feet (used as dwelling and stable), and contents nearly burnt out and most part of roof off.	Merbai, widow of Nassarwanji Wacha.	„ 3,000...	Light thrown down.	Do. do. ...	Extinguished by firemen with 1 steamer and 1 hydrant. Not insured.
7th Dec. at 2-45 P.M.	Arthur Road, Chinchpokli.	A jowli hut severely damaged by fire.	Ghanba Tookaram	„ 4...	Do. ...	Do. do. ...	Do. do.
7th Dec. at 2-50 P.M.	Tava Lane, Abdul Rahimon Street.	Contents in loft on 2nd floor damaged by fire; roof over by fire and breakage.	Rowji Soonderdas.	„ 30...	Do. ...	Domestic supply of water used.	Extinguished by inmates and firemen with buckets. Not insured.

Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, Fire.	Remarks.
1892.							
16th Dec. at 11-15 A.M.	Parel Road, Chinchpoogli.	A small quantity of rags damaged by fire on 1st floor.	Hariba Makoonji	Nil ...	Light thrown down.	Water stored on premises.	Extinguished by inmates. Not insured.
18th Dec. at 2-1 A.M.	Mahalarao Wadi, Kalbadevi Road.	A small quantity of hay burned in stable on ground floor.	Salji Jagjivan...	Rs. 5...	Do. ...	Water used from well and main at once.	Extinguished by fireman with 1 stand-pipe and strangers with one private manual. Building insured.
20th Dec. at 1-45 P.M.	Bhendi Bazar ...	Some wearing apparel damaged by fire on ground floor.	Abdul Rajab ...	Re. 1...	Careless use of kerosine lamp.	Domestic supply of water used.	Extinguished by inmates. Not insured.
20th Dec. at 7-20 P.M.	Girgam Back Road.	A kerosine oil lamp destroyed on 3rd floor.	Ramji Purshotum.	„ 1...	Kerosine lamp exploding.	No water used...	Extinguished by inmates. Building insured.
26th Dec. at 6-57 A.M.	Nishanpada Cross Lane.	About 2 ft. × 2 ft. of flooring burned on ground floor.	Karimbhai Narsi	Rs. 5...	Upsetting molten lead.	Water stored on premises.	Extinguished by inmates. Not insured.
26th Dec. at 11-50 A.M.	Nagdevi Road...	A bed and bedding damaged by fire on third floor.	Mahomed James.	„ 10...	Children playing with matches.	Do. ...	Do. Do.

29th Dec. at 12-1 P.M.	Bhoiwada, Parel.	Some bamboo matting burned on ground floor.	Casam Jooma ...	Re. 1...	Unknown ...	Water stored on premises.	Extinguished by inmates. Not insured.
30th Dec. at 7-50 P.M.	Burkhan Kamadin Street, Bellasis Road.	A quantity of grass burned in tiled shed; roof of ditto damaged by breakage.	Haji Sidhi ...	Rs. 12...	Spark from oil lamp.	Do. ...	Extinguished by inmates. Insurance unknown.
31st Dec. at 5-6 P.M.	Lower Colaba ...	A quantity of loose cotton damaged by fire and water on ground floor.	Goculdas Kalianjee.	„ 960...	Stone in machinery.	Do. ...	Extinguished by press hands. Insured.
1893.							
3rd Jan. at 11-30 P.M.	Kamathipura 10th Lane.	Roof slightly damaged by fire.	Mathu Jassu ...	„ 3...	Kerosine oil lamp upset.	Do. ...	Extinguished by inmates. Not insured.
6th Jan. at 3-5 P.M.	Abdul Rahiman Street.	A quantity of cow-dung cakes burned on 2nd floor.	Sorabji Nasarwanji.	Nil ...	Careless use of fire.	Domestic supply of water used.	Extinguished by firemen with buckets. Not insured.
7th Jan. at 3-45 P.M.	Memonwada Street.	A quantity of grass burned in stables.	Hadji Casum ...	Re. 1...	Careless smoking.	Do. ...	Extinguished by inmates; building insured.
9th Jan. at 2-35 P.M.	Wadi Bandar ...	Registry Office of goods depôt and contents severely damaged by fire and heat.	G. I. P. Ry. Co.	Rs. 1,500...	Do. ...	Water used from main at once.	Extinguished by firemen with stand pipe and Railway employés with private hydrant and steamer. Insured.

Date.	Locality.	Nature of property destroyed.	Name of owner.	Estimated damage.	Cause of fire	Time at which the water was turned on to, and supplied at, fire.	Remarks.
1893.							
10th Jan. at 4-15 P.M.	Gamdevi Road...	Some bedding slightly damaged by fire in loft over ground-floor.	Maneckji Cawasjee.	Re. 1...	Spark from fire.	Domestic supply of water used.	Extinguished by inmates. Not insured.
15th Jan. at 12-17 P.M.	Mody Bunder, Frere Road.	A stack of teak logs and planks severely damaged by fire on open ground.	Jagjivan Kasibhoy.	Rs. 5,000	Unknown ...	Water used from main at once.	Extinguished by firemen with 1 steamer and 1 stand pipe. Not insured.
16th Jan. at 8-1 P.M.	Port Trust Bundar, Mahim.	A quantity of rubbish burned on open ground.	Gopal Bansee ...	Nil.	Light thrown down.	Sea water used...	Extinguished with buckets. Not insured.
18th Jan. at 1-30 P.M.	Tardeo Road, Mahaluxmi.	A jowli hut burned out.	Sukharam Malu.	Re. 1	Spark from Fire.	No water used...	Extinguished by inmates. Not insured.
19th Jan. at 11-55 P.M.	Sholapur Street, Wari Bunder.	A jowli hut nearly burned out.	Mahiput Govind.	Rs. 15	Not known ...	Water used at once from main.	Extinguished by firemen with stand pipe. Insurance not known.

27th Jan. at 2-30 P.M.	Hornby Road, Municipal Hall.	A tie rope burned and two scaffold poles slightly damaged by fire on tower.	The Bombay Municipality...	*Nil.* ...	Careless smoking.	Water stored on premises.	Extinguished by firemen with hand-pump. Insurance unknown.
30th Jan. at 7-30 P.M.	Curey Road, Parel	A mattress burned on ground floor of chawl.	Mungaldas ...	Rs. 2 ...	Careless use of fire.	No water used..	Burned out. Not insured.
2nd Feb. at 12-30 P.M.	Kamathipura 11th Street.	Roof of chawl slightly damaged by fire and breakage.	Dhondoo Metwala.	Rs. 2 ...	Light thrown down.	Domestic supply of water used.	Extinguished by inmates. Not insured.
4th Feb. at 9-1 A.M.	Madanpura ...	A thatched shed and contents nearly burned out	Bai Motlabai ...	Rs. 25 ...	Spark from fire.	Do.	Extinguished by neighbours. Not insured.
7th Feb. at 2-35 P.M.	DeLisle Road ...	A bamboo thatched shed and contents nearly burned out.	Sadoo Nathoo ...	Rs. 25...	Light thrown down.	Water used from main at once.	Extinguished by Firemen with 1 hydrant. Not insured.
7th Feb. at 6-26 P.M.	Nagdevi Street...	A kerosine lamp destroyed on fifth floor.	Abdul Husen Abdulali.	Re. 1...	Kerosine lamp upset.	No water used...	Extinguished by inmates. Building insured.
8th Feb. at 1-30 P.M.	Supari Bag Road	A quantity of rubbish burned in blow room on ground floor.	Morarjee Gocouldas & Co.	*Nil.*	Friction ...	Water stored on premises.	Extinguished by Mill employés with steam pump. Insured.

Date.	Locality.	Nature of property destroyed.	Name of owner.	Estimated damage.	Cause of fire.	Time at which the water was turned on to, and supplied at, fire.	REMARKS.
1893. 8th Feb. at 6-40 P.M.	Colaba Road ...	Contents in drying room and roof of moulding shed damaged by fire.	Government Gun Carriage Factory.	Rs. 150...	Over-heat of drying room.	Water used from well on premises.	Extinguished by employés and Firemen with private manual. Insurance unknown.
11th Feb. at 3-35 P.M.	Old Race Course, Mahalakshmi.	A quantity of hay damaged by fire on open ground.	Motabhai ...	,, 25...	Light thrown down.	Water used from main at once.	Extinguished by Firemen with stand-pipe. Not insured.
11th Feb. at 11-1 P.M.	DeLisle Road ...	Do. ...	Gowardhan Khemji.	,, 22...	Do. ...	Do. ...	Do.
14th Feb. at 9-3 P.M.	Girgam Back Road, Dhobie Talao.	A quantity of grass burned and a jowli hut slightly damaged by fire.	Cawasji Cursetji.	,, 2...	Careless use of oil-lamp.	Water used from well on premises.	Extinguished by inmates. Not insured.
18th Feb. at 4-30 P.M.	Frere Bunder, Sewri.	A number of large stacks of hay and 5 vessels loaded with hay nearly destroyed.	Kushaba Kalyan and others.	,, 65,000..	Light thrown down.	Water used at once from main and at intervals.	Extinguished by Firemen with four steamers (steamers and hydrants being in use till 22nd February 1893). Insurance unknown.

18th Feb. at 9-1 P.M.	Hamam Gully ...	Some cloth decorations damaged by fire on ground floor.	Narayan Moolji.	Re. 1...	Careless use of oil-lamp.	No water used...	Extinguished by inmates. Insurance unknown.
20th Feb. at 12-15 A.M.	Duncan Road ...	A building of 3 floors (about 60×40 ft.) used as store, shops and dwellings and contents severely damaged by fire and roof off. Roof of adjoining building damaged by breakage.	Haji Kasam Yacub.	Rs. 35,000..	Spontaneous combustion.	Water used from main at once.	Extinguished by Firemen with fire steamers and 1 standpipe. Insurance unknown.
20th Feb. at 2-45 A.M.	Madanpura, Ripon Road.	A tiled shed (used as a buffallo stable) damaged by fire and water; 13 buffallo seriously burned and one burned to death.	Delichand Ooka.	„ 4,600...	Light thrown down.	Water used from main at once.	Extinguished by Firemen with 1 steamer and 1 hydrant. Insurance unknown.
21st Feb. at 5-1 P.M.	Two Tanks ...	Roof of chawl slightly damaged by fire.	Haji Kasam ...	„ 2...	Unknown ...	Water stored on premises.	Extinguished by inmates. Not insured.
22nd Feb. at 2-30 A.M.	Tardeo ...	A number of stacks of hay nearly destroyed.	Pardesee Bessasur and others.	„ 22,000..	Light thrown down.	Water used at once from main.	Extinguished by Firemen with 3 steamers. Not insured.

C 24

Date.	Locality.	Nature of Property destroyed.	Name of Owner.	Estimated damage.	Cause of fire.	Time at which the water was turned on to, and supplied at, fire.	REMARKS.
1893.							
26th Feb. at 6-10 A.M.	Kamathipura 11th Lane.	Roof of chawl severely damaged by fire.	Luxuman Bhagh.	Rs. 300...	Careless use of fire.	Water used at once from main.	Extinguished by firemen with 1 steamer. Not insured.
28th Feb. at 10-30 P.M.	Darukhana, Mazagon.	Bamboo partition on ground floor of chawl slightly damaged by fire.	Sudail Kasiram.	Re. 1...	Spark from fire.	Water stored on premises.	Extinguished by inmates. Not insured.
4th March at 7-50 P.M.	Hanuman Lane, Kalbadevi Road.	Contents of stable damaged by fire, heat and breakage.	Rupji Jivraj ...	Rs. 50...	Oil lamp upset	Water used from service pipe.	Extinguished by inmates and firemen with private manual and Brigade hand pump. Building insured.
4th March at 5-50 P.M.	Paidhowni Road.	Some old clothes damaged by fire on first floor.	Krishnaji Ramji.	*Nil.*	Careless use of fire.	Do. ...	Extinguished by inmates. Not insured.
5th March at 2-1 A.M.	Haines Road ...	A quantity of grass damaged by fire on open ground.	Sakharam Pandu	Re. 1...	Light thrown down.	Domestic supply of water used.	Do. do.

7th March at 5-25 A.M.	Nepean Sea Road	Three rooms and a roof of a one-floor building nearly burned out.	Bai Meherbai Nasarwanji Vachagandhy.	Rs. 6,000...	Unknown ...	Water used from main and well at once.	Extinguished by firemen with 2 steamers. Insured.
8th March at 8-30 A.M.	Mahim Bazaar...	A quantity of fireworks destroyed in shop on ground floor; rest of contents in ditto damaged by water.	Dhondoo Vishram.	„ 200...	Fireworks exploding during manufacture.	Water from main at once.	Extinguished with 1 hydrant. Not insured.
12th March at 1-45 P.M.	Telli Mohlla ...	Contents on second floor damaged by fire and water; roof by breakage.	Abdul Rahiman.	„ 300...	Careless smoking.	Domestic supply of water used.	Extinguished by inmates. Not insured.
15th Mar. at 1-30 A.M.	Babula Tank Road.	A thatched shed (used as stable) and contents severely damaged by fire.	Haji Nabbi Baksh.	„ 85...	Do. ...	Water used at once from main.	Extinguished by firemen with a stand pipe. Not insured.
15th Mar. at 1-56 A.M.	Haines Road ...	A corrugated iron shed (used as store) and contents severely damaged by fire.	Ramji Balaji ...	„ 50...	Do. ...	Do. ...	Do. do.
15th Mar. at 7-30 A.M.	Old Nagpada ...	Contents in loft damaged by fire and roof by breakage.	Haji Kadardina Rahimtula.	„ 15...	Light thrown down.	Water used from service pipe.	Extinguished by inmates. Not insured.

Date.	Locality.	Nature of property destroyed.	Name of Owner.	Estimated Damage.	Cause of Fire.	Time at which the water was turned on to, and supplied at, fire.	REMARKS.
1893. 15th Mar. at 3-1 P.M.	Lower Colaba ...	A quantity of cotton damaged by fire and water on ground floor.	The Bombay Cotton Press Co.	Rs. 5,000...	Friction ...	Water stored on premises.	Extinguished by Press employés with hydrant. Insured.
15th Mar. at 8-30 P.M.	Haines Road ...	A stone building of one floor about 200×80 feet (used as reeling room and store) and contents nearly burned out; contents in Mill adjoining slightly damaged by water.	Greaves, Cotton & Co.	„ 60,000..	Unknown ...	Water used from main, tank and well at once.	Extinguished by firemen with 5 steamers and Mill employés with private hydrants. Insured.
17th Mar. at 3-15 P.M.	Victoria Bunder, Lower Colaba.	A quantity of cotton damaged by fire and water on first floor of Cotton Press.	Jocubhai Dowlatram.	„ 500...	Friction ...	Water stored on premises.	Extinguished by Press employés with buckets. Insured.

Appendix D.

PROGRESS REPORTS

1892

OF NEW WORKS

BOMBAY MUNICIPALITY.

PROGRESS REPORTS UP TO THE END OF MARCH 1892

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
I.—WATER WORKS.				
WORKS COMPLETED.				
1. Additional water mains.....	1,00,000	Loan	23rd Jan. 1890 ...	1st Mar. 1890 ..
2. Queen's Road 24" main.....	63,360	Do. ...	9th July 1891...	9th July 1891...
3. Fencing and boundary stones for Pawai land.	2,530	Cur. rev..	11th June 1891...	11th June 1891...
WORKS IN PROGRESS.				
4. Repairs at Bhundarwada Reservoir.	65,500	Do. ...	23rd Jan. 1890 ...	1st Mar. 1890 ...
5. Stove and tank for dipping pipes at the Water Works Stores.	1,292	Do. ...	26th May 1887 ...	26th May 1887 ...
WORKS TO BE COMMENCED.				
6. Latrines and urinals for workmen at Chinchpokli stores.	1,000	Do. ...	Budgetfor1892-93	1st Mar. 1892 ...
7. Chowki for watchmen and other minor improvements at Bhundarwada Reservoir.	430	Do. ...	Do.	Do. ...
8. Fencing new ground at Chinchpokli and western boundary of old ground.	2,600	Do. ...	Do.	Do. ...
9. Alteration of Engine-house, Malabar Hill Reservoir, to provide quarters for Inspector.	3,500	Do. ...	Do.	Do. ...
10. Covering storage basin at the Bhundarwada Reservoir and constructing filter over it.	44,597	Loan	14th Jan. 1892 ..	14th Jan. 1892 ...
11. Residence for Chief Inspector (W. W.) at Babula Tank Road and rooms for 6 sluicemen.	46,360	Do.	Do. ...	Do. ...

APPENDICES TO RECORD.

OF NEW WORKS NOW IN COURSE OF CONSTRUCTION.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Mar. 1892.	Remarks.
		Rs.	
5th Nov. 1890 ...	.....	87,940	Work of laying pipes almost completed and accounts settled; additional pipes are to be laid.
3rd Sep. 1891...	3rd March 1892...	44,798	Work of laying pipes completed; final accounts are to be adjusted.
23rd Dec. 1891 ...	29th Feb. 1892 ...	2,525	Work completed and accounts adjusted.
Mar. 1891 ...	31st Mar. 1893	24,813	Balance of the grant transferred to work of repairing, distributing and settling basins, Corporation Resolution No. 6259, 3rd September 1891, and work commenced by Indian Patent Stone Company.
Dec. 1891 ...	31st Dec. 1892 ..	.....	Balance of Rs. 1,292 out of the grant of Rs. 25,000 for constructing store-room and offices and filling compound at Water Works Stores, available for this work which has been commenced.
.....	.....	.....	Contracts are being prepared.
.....	.....	.....	
.....	.....	.....	
.....	.....	.....	
.....	.....	.....	
.....	.....	.....	

BOMBAY MUNICIPALITY.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS.				
WORKS COMPLETED.				
12. Drainage of Fort	(a)4,13,909	Cur. rev ...	22nd Dec. 1884...	22nd Dec. 1884...
13. Queen's Road and Girgaum sewerage and house connection works.	11,14,929	Do. ...	28th July 1887 ...	28th July 1887...
14. New latrine at Love Grove Pumping Station.	1,617	Do. ...	.....	1st Mar. 1899 ...
15. Storm-water drain at Colaba Causeway.	4,740	Sur. cash balance.	19th Mar. 1891.	19th Mar. 1891....
16. Four half size masonry gullies with 6" C. I. connections in Eldon Road, opposite the back of the High Court.	529	Cur. rev.	9th Feb. 1891 ...	1st Mar. 1891 ...
17. Masonry gullies at the junction of Tardeo and Mahalakshmi Roads.	891	Do. ...	Do. ...	Do. ...
18. Storm-water drain in Jagannath Sadashiv Street.	2,170	Do. ...	Do. ...	Do. ...
19. Storm-water connection at the junction of DeLisle and Arthur Roads.	114	Do. ...	Do. ..	Do. ...
20. Five openings on drain running through Dick's Tank latrines.	145	Do. ...	Do. ..	Do. ...
21. W. I. plates over openings of drain in Gilder Street.	421	Do. ...	Do. ...	Do. ...
22. Renewing side drain in Love Lane.....	286	Do. ...	Do. ...	Do. ...
WORKS IN PROGRESS.				
23. Ventilating shafts, Marine Lines, Mayo Road and Queen's Road.	6,750	Do. ...	1st Mar. 1888 ..	1st Mar. 1888 ...
24. Altering connection of main drain with main sewer at Bellasis Bridge.	1,100	Do. ...	16th Jan. 1889 ...	1st March 1889...
25. New latrine at Bandora Slaughter House.	3,919	Do. ...	23rd Jan. 1890 ...	1st Mar. 1890 ...
26. House connections without privy fittings in the first sections of Drainage Scheme.	(b) 5,78,611-14-4	Loan ...	8th Dec. 1881 ...	5th May 1885 ...
27. Automatic flushers at heads of gullies...	5,570	Do. ...	Do. ...	.....

(a) From the grant of Rs. 4,13,909, the sum of Rs. 4,521-1-6 has been transferred to meet the cost Resolution No. 1950,

(b) House connections without privy fittings ... ...
Add—Transferred from Argyle Road, Standing Committee's Resolution No. 5192 of

Less—Amount transferred to meet excess on Pumping Engines, Town Council

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work	Certified Expenditure up to the end of Mar. 1892.	Remarks.
		Rs. a. p.	
20th Oct. 1885 ...	1st Mar. 1889 ...	3,58,871 0 0	Work completed ; final accounts adjusted.
Nov. 1888 ...	1st Feb. 1891 ...	8,76,473 0 0	Work entrusted to Messrs. Bulkley & Co. and completed on 12th May 1891. Final accounts are adjusted.
1st Jan. 1891 ...	26th June 1891 ...	1,101 0 3	Work completed. Accounts adjusted.
24th Apr. 1891...	30th June 1891...	4,591 0 3	Work completed departmentally.
Nov. 1891...	29th Feb. 1892...	446 8 8	Work completed by petty work contractors. Petty work contractor's bill passed.
4th Nov. 1891...	11th Dec. 1891...	784 14 1	Work completed by petty work contractors. Accounts adjusted.
20th Nov. 1891...	29th Feb. 1892...	461 3 8	Work completed by petty work contractors. Bill not passed.
5th Feb. 1892 ...	Do.	7 9 5	Work completed by petty work contractors. Bill not passed.
10th Dec. 1891 ...	20th Dec. 1891 ..	133 10 4	Work completed by petty work contractors. Bill passed.
1st Dec. 1891 ...	30th Dec. 1891 ...	364 9 7	Work completed by petty work contractors whose bill has been passed.
20th Jan. 1892	5th Feb. 1892 ...	8 7 6	Work completed by petty work contractors. Accounts are to be adjusted.
7th Nov. 1888...	31st Mar. 1892 ...	3,717 5 1	The remaining one iron and four masonry shafts are under construction.
11th Dec. 1891...	15th June 1892 ...	985 6 8	Work being completed departmentally.
4th January 1891	31st Dec. 1891 ...	2,001 9 7	Constructing road to the latrine is being carried out by petty works contractors.
8th Jan. 1887 25th Jan. 1892	31st July 1888 31st July 1893	94,452 0 0	Khetwadi section of the work is done, other portions in progress. Work is being carried out departmentally.
Do.	Do.	.....	A contract for supply of iron materials at a cost of Rs. 1,53,853 has been carried out. Work ordered to be proceeded with departmentally.

of the pipe sewer from Clare Road along the south portion of Haines and DeLisle Roads. Corporation dated 5th June 1890.

... ... Rs. 5,71,165 0 0
20th June 1888 ... ... „ 19,046 14 4

Total Rs. 5,90,211 14 4
Resolution No. 52, dated 13th January 1882 ... ... „ —11,600 0 0

Rs 5,78,611 14 4

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS—*contd.*				
WORKS IN PROGRESS—*contd.*				
28. New latrines and urinals	41,238-11-3	Cur. rev...	16th Oct. 1889 ...	16th Oct. 1889 ...
29. Diverting pipe sewers along the site of the proposed overbridge at Falkland Road to allow the construction of the Bridge.	10,338	Do. ...	28th Aug. 1890...	28th Aug. 1890...
30. House connections in Agripada District.	2,48,642	Loan	8th Oct. 1888 ...	1st July 1890 ..
31. Construction of a 12″ pipe sewer in continuation of the Arthur Road 15″ pipe sewer.	2,956	Cur. rev...	11th May 1891 ...	11th May 1891 ...
32. Arrangements for flushing Parel and Bellasis Road storm-water drain from Babula Tank and Nagpada Tank.	3,844	Do. ...	23rd Jan. 1890 ..	1st Mar. 1890 ...
33. Filling up the Aitken low-level sewer for short lengths near Bellasis Bridge and Clerk Road.	99	Do.	Do. ...	Do. ...
34. Construction of sewer flushing arrangements.	14,000	Loan ...	Do. ...	Do. ...
35. Six C. I. manhole frames and covers on 12″ pipe drain at Matharpakadi.	291	Cur. rev...	9th Feb. 1891,...	1st March 1891.
36. Closing up with cast-iron the perforations in manhole covers.	4,000	Do. ...	Do. ...	Do. ...
37. Making fair weather connections of Agripada open drain with Ripon Road sewer.	987	Do. ...	Do. ...	Do. ...
WORKS TO BE COMMENCED.				
38. Filling and pitching slope of portion of Haines Road forming boundary of the storm-water reservoir.	4,888	Do. ...	16th Jan. 1889....	16th Jan. 1889 ..

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Mar. 1892.	Remarks.
		Rs. a. p.	
6th Dec. 1889...	.....	11,586 1 4	Portion of the work entrusted to petty work contractor.
1st Nov. 1890 ...	.....	5,240 1 0	The work is being executed departmentally and is at a stand still, as the question of the width of the bridge is not settled. It will take about a month to finish the work when it is recommenced.
20th Oct. 1890 ...	15th Oct. 1892 ...	1,28,817 0 0	Tender of Mr. Sitaram Lakshman accepted, contract signed on 13th October 1890, and the work commenced on 20th October 1890.
15th May 1891 ..	30th June 1892...	.....	The work was taken in hand on 15th May 1891, but it was stopped on account of the approach of the rains and rock excavation. The work is in progress now.
21st Apr. 1891 ...	.....	925 0 0	Work being carried out by petty work contractors. *Vide* Corporation Proceedings, dated 18th February 1892, pages 572 and 573. The work at Babula Tank is completed.
15th May 1891 ...	15th June 1892...	81 2 0	Work to be done departmentally in the hot season, when the ground water is lower.
20th Sept. 1891...	31st Dec. 1892 ...	1,432 8 0	Work being executed departmentally.
4th Jan. 1892 ...	29th Feb. 1892...	108 15 3	Work entrusted to petty work contractors (nearly finished).
1st Oct. 1891 ...	.....	223 9 11	Work entrusted to Messrs. Richardson and Cruddas and is in progress; the probable time of completion cannot be fixed.
3rd Nov. 1891 ..	29th Feb. 1892...	725 11 0	Work being carried out departmentally (nearly completed).
.....	.....	294 0 0	Work not undertaken, pending consideration of Mr. Baldwin Latham's report. Some quantity of rubble deposited on the bank that it may not be washed away.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
III.—ROADS, BUILDINGS, &c.				
WORKS COMPLETED.				
39. Privy accommodation for staff at Bori Bunder Stables (Paltan Road).	705-15-4	Cur. rev.	23rd Jan. 1890 ...	1st Mar. 1890 ...
40. Converting the chunam shed at Charni Road chowki into a new chowki.	761	Do. ...	9th Feb. 1891 ...	1st Mar. 1891 ...
WORKS IN PROGRESS.				
41. Night-soil depôt near the junction of DeLisle and Carroll Roads.	26,394	Do. ...	25th April 1888...	25th April 1888.
42. Retaining wall extension, Walkeshwar Road.	9,150	Do. ...	16th Jan. 1889 ...	16th Jan. 1889 ...
43. Roads and streets in Agripada and elsewhere.	15,00,000	Loan	.....	.....
44. Halalcores chawls in Khursetji Sooklaji's Street.	86,000	35 Lakhs Loan.	23rd Jan. 1890.	Nov. 1890 ...
45. Six-chamber latrine and six-chamber urinals in Gilder Street at the junction of Falkland Road and Gilder Street.	4,180	Cur. rev.	9th Feb. 1891 ...	1st Mar. 1891 ...
46. Four-chamber urinal in 2nd Bhoiwada Street.	524	Do. ...	Do. ...	Do. ...
47. Building a new bungalow for the Victoria Gardens Superintendent.	14,203	Do. ...	16th July 1891...	16th July 1891...
48. Erecting a refreshment room in the Victoria Gardens.	2,727	Do. ...	Do. ...	Do. ...
48A. Chawl of 17 rooms at Love Grove ...	9,367	Do. ...	9th Feb. 1891...	1st Mar. 1891 ...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Mar. 1892.	REMARKS.
		Rs. a. p.	
20th Dec. 1890 ...	28th Feb. 1891 ...	705 15 4	Work completed by petty works contractors. Accounts adjusted.
1st Nov. 1891 ...	5th Jan. 1892 ...	47 14 8	Work completed by petty work contractors. Bill not passed.
.....	.....	10,409 8 3	Tender is received. An objection is taken to the site by David Mills Co. A new site is chosen at the north end and on the west side of De Lisle Road and its junction with Parbhadevi Road.
14th Jan. 1892...	20 March 1892 ...	8,653 7 0	Work in progress departmentally. There remains Rs. 496-9-0 of the grant of Rs. 5,000 allowed for the building of the retaining wall at Walkeshwar. The work proceeded until 19th June 1891, when with the near approach of the monsoon it was thought desirable not to open any more of the foundation, as even at ordinary tides the foundations were always full of water, so the work was finished with dry stone for a length of some 12 or 15'. The remaining portion of the grant is now to be spent in rebuilding this temporary piece.
.....	... ..	6,51,822 10 8	Lines of roads are marked and sanctioned. The land for the Agripada District is being gradually acquired through the agency of a broker. When a sufficient area is acquired the construction of the streets will be taken in hand. The extent of land to be acquired is large, the operation of acquisition is difficult, but it is proceeding with all the expedition which is materially possible.
19th June 1891...	30th Oct. 1892 ...	23,947 12 9	Work entrusted to Messrs. Framji & Jewanji.
2nd Jan. 1892...	29th Feb. 1892...	110 15 4	Work in progress by petty work contractors.
18th April 1891...	10th Nov. 1891...	.....	Work entrusted to petty work contractors (nearly completed).
15th Jan. 1892 ...	15th July 1892 ...	3,272 12 4	Messrs. Bhedwar & Co.'s tender is accepted and the work is in progress.
21st Jan. 1892 ...	21st May 1892 ...	619 5 9	Mr. Mukundrao Limbaji's tender is accepted and the work is in progress.
20th Feb. 1892...	20th Aug. 1892...	118 8 4	Work entrusted to Messrs. Gangaram Lakshuman & Co. (in progress).

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
III.—ROADS, BUILDINGS, &c.—*contd.*				
WORKS TO BE COMMENCED.				
49. New Market at Colaba.....	50,300	Loan	26th March 1888.	26th Mar. 1888 ...
50. Purchase of land for chawls for the biggaris who clean the Arthur Crawford Markets and building the chawls.	22,700	Do. ...	25th April 1888...	25th April 1888 ..
51. Purchase of 11,838 sq. yds. of land at DeLisle and Arthur Roads Junction.	23,676	Do. ...	26th March 1888.	26th Mar. 1888...
52. Road through Nowrojee Hill from Elphinstone Bridge to Dongri Street.	3,32,023	Do. ...	Do. ...	Do. ...
53. Extension of the Mutton Markets, &c., Crawford Market.	42,942	Do. ...	Do. ...	Do. ...
54. Extension of Bhuleshvar Market	4,50,000	Do. ...	9th July 1888 ...	9th July 1888 ...
55. Foras Road Market	50,000	Do. ...	17th April 1890...	25th Sept. 1890...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Mar. 1892.	Remarks.
		Rs. a. p.	
.....	.....	.....	Site of market not yet settled.
.....	.....	.....	The question of site to be decided in 1892.
.....	.....	.....	Owner unwilling to sell.
.....	.....	75 0 0	Negotiations at a stand-still.
.....	.....	232 0 0	This was deferred until the question whether the land south of the Markets should be acquired or not had been settled. It was then taken up again, and is now in progress of settlement.
.....	.....	2,93,515 3 9	Land acquired; plans prepared and forwarded for approval. Cannot be taken in hand till Government reply to the query, whether they will bear half the cost of providing school accommodation over the Market.
.....	.....	.....	Tenders received are under consideration.

BOMBAY MUNICIPALITY.

PROGRESS REPORTS UP TO THE END OF JUNE 1892

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
I.—WATER WORKS.				
WORKS COMPLETED.				
1. Additional water mains.....	1,00,000	Loan	23rd Jan. 1890 ...	1st Mar. 1890 ..
2. Queen's Road 24" main.....	63,360	Do. ...	9th July 1891...	9th July 1891...
WORKS IN PROGRESS.				
3. Repairs at Bhundarwada Reservoir.	65,500	Cur. rev...	23rd Jan. 1890 ...	1st Mar. 1890 ...
4. Stove and tank for dipping pipes at the Water Works Stores.	1,292	Do. ...	26th May 1887 ...	26th May 1887 ...
5. Repairs, Tulsi Main Embankment	22,000 13,000 35,000	Do. ...	14th Jan. 1892. 27th Jan. 1892.	14th Jan. 1892. 1st Mar. 1892.
6. Do. Vehar do.	10,000	Do. ...	15th Oct. 1891 ...	15th Oct. 1891 ...
7. Latrines and urinals for workmen at Chinchpokli stores.	1,063	Do. ...	4th Feb. 1892 ...	1st Mar. 1892 ...
8. Chowki for watchmen and other minor improvements at Bhundarwada Reservoir.	430	Do. ...	Do.	Do. ...
9. Fencing new ground at Chinchpokli and western boundary of old ground.	2,600	Do. ...	Do.	Do. ...
10. Alteration of Engine-house, Malabar Hill Reservoir, to provide quarters for Inspector.	3,500	Do. ...	Do.	Do. ...
WORKS TO BE COMMENCED.				
11. Covering storage basin at the Bhundarwada Reservoir and constructing filter over it.	44,597	Loan	14th Jan. 1892 ..	14th Jan. 1892 ...
12. Residence for Chief Inspector (W. W.) at Babula Tank Road and rooms for 6 sluicemen.	46,360	Do.	Do. ...	Do. ...
13. Connection at Chinchpokli between Tansa and Vehar mains.	7,164	Do.	16th June 1892...	16th June 1892...

APPENDICES TO RECORD.

OF NEW WORKS NOW IN COURSE OF CONSTRUCTION.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of June 1892.			Remarks.
		Rs.	a.	p.	
5th Nov. 1890 ...	31st August 1892	95,799	0	0	Work of laying pipes under 1st contract completed and accounts settled; additional pipes are being laid.
3rd Sep. 1891 ...	3rd March 1892 ...	51,099	0	0	Work of laying pipes completed; final accounts are to be adjusted.
Mar. 1891 ...	31st Mar. 1893 ...	33,541	0	0	Balance of the grant transferred to work of repairing, distributing and settling basins, Corporation Resolution No. 6259, 3rd September 1891, and work of repointing walls of the distributing basin completed by Indian Patent Stone Company. It is now proposed to utilize the balance of the grant for covering the floor of the distributing basin with Indian patent stone and for other works in that basin.
Dec. 1891 ...	31st Dec. 1892 ...	.....			Balance of Rs. 1,292 out of the grant of Rs. 25,000 for constructing store-room and offices and filling compound at Water Works Stores, available for this work which has been commenced.
11th Mar. 1892...	6th July 1892 ...	9,288	0	0	Work in progress.
15th Jan. 1892 ...	25th June 1892...	4,408	0	0	Work completed.
May 1892...	31st Oct. 1892 ...	12	0	0	Contracts let; works in progress.
Do. ...	Do. ...	5	0	0	
Do. ...	Do. ...	31	0	0	
Do. ...	Do. ..	88	0	0	
Not commenced yet.	31st May 1894 ...	.....			Contracts are being prepared.
Do. ...	Do. ...	.....			
.....	31st Oct. 1892 ...	.....			This was sanctioned out of savings in the grant for the Queen's Road 24" main.

BOMBAY MUNICIPALITY.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS.				
WORKS COMPLETED.				
14. Queen's Road and Girgaum sewerage and house connection works.	11,14,929	Cur. rev...	28th July 1887 ...	28th July 1887...
15. Storm-water drain in Jagannath Sadashiv Street.	2,170	Do. ...	9th Feb. 1891 ...	1st Mar. 1891 ...
16. Storm-water connection at the junction of DeLisle and Arthur Roads.	114	Do. ...	Do. ...	Do. ...
17. Renewing side drain in Love Lane ...	286	Do. ...	Do. ...	Do. ...
18. New latrine at Bandora Slaughter House.	3,919	Do. ...	23rd Jan. 1890 ...	1st Mar. 1890 ..
19. Fair weather connection of the open drain at the junction of DeLisle and Arthur Roads with 18" pipe sewer.	969	Do. ...	14th Jan. 1892...	1st Mar. 1892 ...
WORKS IN PROGRESS.				
20. Ventilating shafts, Marine Lines, Mayo Road and Queen's Road.	6,750	Do. ...	1st Mar. 1888 ...	1st Mar. 1888 ..
21. Altering connection of main drain with main sewer at Bellasis Bridge.	1,100	Do. ...	16th Jan. 1889 ...	1st March 1889...
22. House connections without privy fittings in the first sections of Drainage Scheme.	(a) 5,78,611-14-4	Loan ...	8th Dec. 1881 ...	5th May 1885 ...
23. Automatic flushers at heads of gullies ...	5,570	Do. ...	Do. ...	.....
24. New latrines and urinals	41,236-11-3	Cur. rev...	16th Oct. 1889 ...	16th Oct. 1889 ...
25. Diverting pipe sewers along the site of the proposed overbridge at Falkland Road to allow the construction of the Bridge.	10,338	Do. ...	28th Aug. 1890...	28th Aug. 1890...
26. House connections in Agripada District.	2,48,642	Loan	8th Oct. 1888 ...	1st July 1890 ..

(a) House connections without privy fittings ... ...
Add—Transferred from Argyle Road, Standing Committee's Resolution No. 5192 of

Less—Amount transferred to meet excess on Pumping Engines, Town Council

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of June 1892.	Remarks.
		Rs. a. p.	
Nov. 1888 ...	1st Feb. 1891 ...	8,76,473 0 0	Work entrusted to Messrs. Bulkley & Co. and completed on 12th May 1891. Final accounts with them are adjusted. Some portion is being carried out departmentally.
20th Nov. 1891...	29th Feb. 1892 ...	461 3 8	Work completed by petty work contractors. Final bill forwarded for sanction.
5th Feb. 1892 ...	Do.	7 9 5	Work completed by petty work contractors. Bill not passed.
20th Jan. 1892 ..	5th Feb. 1892 ...	240 15 9	Work completed by petty work contractors, and accounts adjusted.
4th January 1891	31st Dec. 1891 ...	2,020 2 7	Work completed, bill not passed.
5th Mar. 1892 ...	15th Aug. 1892...	751 1 9	Work completed. Accounts are to be adjusted.
7th Nov. 1888...	31st Mar. 1892 ...	3,745 7 1	The remaining one iron and four masonry shafts are under construction.
11th Dec. 1891...	15th June 1892 ...	1,022 8 1	Work being completed departmentally.
{ 8th Jan. 1887 { 25th Jan. 1892	31st July 1888 31st July 1893	1,31,990 7 3	Khetwadi section of the work is done, other portions in progress. A contract for supply of iron materials at a cost of Rs. 1,53,858 has been carried out.
Do.	Do.	.....	Work ordered to be proceeded with departmentally, but stopped pending decision of Corporation as regards house-connections in general.
" 6th Dec. 1889...	.....	14,183 11 2	Portion of the work entrusted to petty work contractor.
1st Nov. 1890 ...	.....	5,424 5 2	The work is being executed departmentally, but now stopped pending acquisition of land.
20th Oct. 1890 ...	15th Oct. 1892 ...	1,40,990 3 6	Tender of Mr. Sitaram Lakshman accepted, contract signed on 13th October 1890, and the work commenced on 20th October 1890.

... ...	Rs.	5,71,165 0 0
20th June 1888	"	19,046 14 4
	Total Rs.	5,90,211 14 4
Resolution No. 52, dated 13th January 1882	"	—11,600 0 0
	Rs.	5,78,611 14 4

BOMBAY MUNICIPALITY.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS—*contd.*				
WORKS IN PROGRESS—*contd.*				
27. Construction of a 12″ pipe sewer in continuation of the Arthur Road 15″ pipe sewer.	2,956	Cur. rev...	11th May 1891 ...	11th May 1891 ...
28. Arrangements for flushing Parel and Bellasis Road storm-water drain from Babula Tank and Nagpada Tank.	3,844	Do.	23rd Jan. 1890 ...	1st Mar. 1890 ...
29. Filling up the Aitken low-level sewer for short lengths near Bellasis Bridge and Clerk Road.	99	Do. ...	Do. ...	Do. ...
30. Construction of sewer flushing arrangements.	14,000	Loan ...	Do. ...	Do. ...
31. Closing up with cast-iron the perforations in manhole covers.	4,000	Cur. rev....	9th Feb. 1891 ...	1st Mar. 1891 ...
32. Construction of pipe sewers in Parel Village Main Road and Government House Road, Parel.	77,603	Loan ...	14th Jan. 1892 ...	14th Jan. 1892 ...
33. Constructing pipe sewers and metal vent shafts in Parel village.	20,852	Do. ...	25th Feb. 1892...	25th Feb. 1892 ...
34. Construction of a storm-water drain in Hornby Road from the Salvation Army Hall to Bazar Gate Street.	21,598	Do. ...	6th Apr. 1892 ...	6th Apr. 1892 ...
35. Constructing a 3-chamber latrine on the water system in Victoria Gardens.	1,396	Surplus cash balance	3rd Dec. 1891 ...	3rd Dec. 1891 ...
36. Connecting the sullage water of the Paidhowni Police Station.	328	Do. ...	7th Mar. 1892 ...	7th Mar. 1892 ...
37. Six-chamber latrine and six-chamber urinals in Gilder Street at the junction of Falkland Road and Gilder Street.	4,180	Cur. rev.	9th Feb. 1891 ...	1st Mar. 1891 ...
38. Four-chamber urinal in 2nd Bhoiwada Street.	524	Do. ...	Do. ...	Do. ...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of June 1892.			Remarks.
		Rs.	a.	p.	
15th May 1891 ...	30th June 1892...	.....			Work in progress.
21st Apr. 1891 ...	.....	925	0	0	The work at Babula Tank is completed.
15th May 1891 ...	15th June 1892...	31	2	0	Work done departmentally.
20th Sept. 1891...	31st Dec. 1892 ...	6,881	0	0	Work being executed departmentally.
1st Oct. 1891 ...	.....	235	1	11	Work entrusted to Messrs. Richardson & Cruddas and is in progress; the probable time of completion cannot be fixed.
26th Apr. 1892...	22nd Jan. 1893...	1,199	10	5	Tender of Messrs. Vishnu Narsingrao & Co. accepted. Contract signed on 21st April 1892 and the work commenced on 26th April 1892.
5th July 1892...	15th Feb. 1892...	279	14	8	Tender of Messrs. Vishnu Narsingrao & Co. accepted and contract has recently been executed.
5th July 1892...	24th Nov. 1892...	251	5	0	Tender of Messrs. Vishnu Narsingrao & Co. accepted on 1st June 1892. Contract has recently been executed.
10th Jan. 1892...	15th Aug. 1892...	72	8	11	Work entrusted to petty work contractors (nearly completed).
18th Apr. 1892...	30th Aug. 1892...	280	7	10	Work being carried out departmentally (nearly completed).
2nd Jan. 1892...	29th Feb. 1892...	168	14	2	Work in progress by petty work contractors.
13th April 1891...	10th Nov. 1891...	.....			Work entrusted to petty work contractors (nearly completed).

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS—*contd.*				
WORKS TO BE COMMENCED.				
39. Filling and pitching slope of portion of Haines Road forming boundary of the storm-water reservoir.	4,888	Cur. rev...	16th Jan. 1889 ...	16th Jan. 1889 ...
40. Arching over main drain at Arthur Road Crossing.	18,000	Loan ...	14th Jan. 1892 ...	14th Jan. 1892 ...
41. Constructing a new drain in Walkeshwar village to receive the drainage of Ambewadi and connect it with the pipe drain running from the Municipal latrine on the foreshore.	2,296	Cur. rev...	Budget for 1892-93.	1st Mar. 1892 ...
42. Vent shafts on Ripon Road sewer ...	3,047	Do. ...	Do. ...	Do. ...
43. Latrines and urinals ...	12,000	Do. ...	Do. ...	Do. ...
III.—ROADS, BUILDINGS, &c.				
WORKS COMPLETED.				
44. Converting the chunam shed at Charni Road chowki into a new chowki.	761	Do. ...	9th Feb. 1891 ...	1st Mar. 1891 ...
WORKS IN PROGRESS.				
45. Night-soil depôt near the junction of DeLisle and Parbhadevi Roads.	26,394	Do. ...	25th Apr. 1888 ...	25th Apr. 1888.
46. Retaining wall extension, Walkeshwar Road.	9,150 5,000	Do. ...	16th Jan. 1889 ...	16th Jan. 1889 ...
47. Roads and streets in Agripada and elsewhere.	15,00,000	Loan	.....	.....
48. Halalkores' chawls in Khursetji Sooklaji's Street.	86,000	35 Lakhs Loan.	23rd Jan. 1890.	Nov. 1890 ...
49. Building a new bungalow for the Victoria Gardens Superintendent.	14,208	Cur. rev...	16th July 1891...	16th July 1891...
50. Erecting a refreshment room in the Victoria Gardens.	2,727	Do. ...	Do. ...	Do. ...
51. Chawl of 17 rooms at Love Grove ...	9,867	Do. ...	9th Feb. 1891...	1st Mar. 1891 ...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of June 1892.	Remarks.
		Rs. a. p.	
... ...	.....	294 0 0	Work not undertaken, pending consideration of Mr. Baldwin Latham's report. Some quantity of rubble deposited on the bank that it may not be washed away.
.....	.....	.....	Work is to be taken in hand after the S.-W. Monsoon.
.....	.....	.....	The execution of the work departmentally recently sanctioned.
.....	.....	.....	The work delayed pending decision of the Corporation regarding a transfer of Rs. 1,850 to be utilized for vent shafts on Queen's Road.
.....	.....	.....	Tenders have been invited for latrines and urinals at Erskine Road, Picket Road and Mazagon Road.
1st Nov. 1891 ...	5th Jan. 1892 ...	47 14 8	Work completed by petty work contractors. Bill not passed.
13th May 1892 ...	.....	10,646 14 4	The work which is entrusted to Messrs. Spencer & Co. is in progress.
14th Jan. 1892...	20th March 1892.	8,868 4 4	Work in progress departmentally. It is stopped at present, but will be recommenced after the rains.
.....	.....	7,84,705 15 7	Lines of roads are marked and sanctioned. The land for the Agripada District is being gradually acquired. When a sufficient area has been obtained the construction of the streets will be taken in hand. The extent of land to be acquired is large, and though the operation of acquisition is difficult, yet it is proceeding with all the expedition possible.
19th June 1891...	30th Oct. 1892 ...	58,805 5 8	Work (entrusted to Messrs. Framji & Jewanji) in progress.
15th Jan. 1892 ...	15th July 1892 ...	9,036 12 3	Work entrusted to Messrs. Bhedwar & Co. The original contract work completed.
21st Jan. 1892 ...	21st May 1892 ...	869 5 9	Work entrusted to Mr. Mukundrao Limbaji and is still in progress though the contrac time has expired.
20th Feb. 1892...	20th Aug. 1892...	2,902 5 10	Work entrusted to Messrs. Gangaram Laksbuman & Co. (in progress).

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
III.—ROADS, BUILDINGS, &c.—*contd.*	Rs.			
WORKS TO BE COMMENCED.				
52. New Market at Colaba	50,300	Loan	26th March 1888.	26th Mar. 1888
53. Purchase of land for chawls for the biggaris who clean the Arthur Crawford Markets and building the chawls.	22,700	Do.	25th April 1888.	25th April 1888.
54. Purchase of 11,838 sq. yds. of land at DeLisle and Arthur Roads Junction.	23,676	Do.	26th March 1888.	26th Mar. 1888.
55. Road through Nowrojee Hill from Elphinstone Bridge to Dongri Street.	3,32,023	Do.	Do.	Do.
56. Extension of the Mutton Markets, &c., Crawford Market.	49,942	Do.	Do.	Do.
57. Extension of Bhuleshwar Market	4,50,000	Do.	9th July 1888	9th July 1888
58. Foras Road Market	50,000	Do.	17th April 1890.	25th Sept 1890.
59. Construction of Engineer's quarters at Love Grove pumping station.	6,875	Cur. rev.	Budget for 1892-93.	1st Mar. 1892
60. Filling in Municipal ground and building a retaining wall in front of house of Mr. Jaikisondas Gangadas at Walkeshwar Road.	4,743	Do.	Do.	Do.
61. Covering with corrugated iron roofing part of the passage between Bori Bunder stables and Workshops as a shelter for hearses and vans.	1,632	Do.	Do.	Do.
62. Constructing a Mangalore tiled roof over the Small-pox Hospital at Arthur Road.	5,633	Do.	Do.	Do.
63. Fencing Municipal ground at Dadur	572	Do.	Do.	Do.

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of June 1892.	Remarks.
		Rs. a. p.	
.....	.....	.....	Site of market not yet settled.
.....	.....	.....	The question of site to be decided. It is proposed to build the chawls on the Municipal ground on the east of the Health Department bullock stables at Paltan Road.
.....	.....	.....	Owner unwilling to sell.
.....	.....	75 0 0	Negotiations at a stand-still.
.....	.....	232 0 0	The drawings and estimates for this work are ready and the contract is being prepared.
.....	.....	2,93,521 9 10	Land acquired; plans prepared and forwarded for approval. Cannot be taken in hand till Government reply to the query whether they will bear half the cost of providing school accommodation over the Market.
.....	.....	.....	Work entrusted to Messrs. Palonji & Littlewood.
.....	.....	.....	Detailed drawings are being prepared.
.....	.....	.....	Question as to whether the owner of the adjoining stables has acquired right of light and air is under consideration and enquiry.
.....	.....	.....	Drawings and estimates are being prepared.
.....	.....	.....	Tender of Messrs. Warden & Co. for this work has been accepted.
.....	.....	.....	Work to be commenced after the monsoons.

BOMBAY MUNICIPALITY.

PROGRESS REPORTS UP TO THE END OF SEPTEMBER 1892

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
I.—WATER WORKS.				
WORKS COMPLETED.				
1. Additional water mains.....	1,00,000	Loan	23rd Jan. 1890 ...	1st Mar. 1890 ..
2. Queen's Road 24" main.....	63,360	Do. ...	9th July 1891...	9th July 1891...
WORKS IN PROGRESS.				
3. Repairs at Bhundarwada Reservoir ...	65,500	Cur. rev...	23rd Jan. 1890 ...	1st Mar. 1890 ...
4. Stove and tank for dipping pipes at the Water Works Stores.	1,292	Do. ...	26th May 1887 ...	26th May 1887 ...
5. Repairs, Tulsi Main Embankment	22,000 13,000 35,000	Do. ...	14th Jan. 1892. 27th Jan. 1892.	14th Jan. 1892. 1st Mar. 1892.
6. Latrines and urinals for workmen at Chinchpokli stores.	1,063	Do. ...	4th Feb. 1892 ...	1st Mar. 1892 ...
7. Chauki for watchmen and other minor improvements at Bhundarwada Reservoir.	430	Do. ...	Do.	Do. ...
8. Fencing new ground at Chinchpokli and western boundary of old ground.	2,600	Do. ...	Do.	Do. ...
9. Alteration of Engine-house, Malabar Hill Reservoir, to provide quarters for Inspector.	3,500	Do. ...	Do.	Do. ...
WORKS TO BE COMMENCED.				
10. Covering storage basin at the Bhundarwada Reservoir and constructing filter over it.	44,597	Loan	14th Jan. 1892 ..	14th Jan. 1892 ...
11. Residence for Chief Inspector (W. W.) at Babula Tank Road and rooms for six sluicemen.	46,360	Do.	Do. ...	Do. ...
12. Connection at Chinchpokli between Tansa and Vehar mains.	7,164	Do.	16th June 1892...	16th June 1892...

APPENDICES TO RECORD.

OF NEW WORKS NOW IN COURSE OF CONSTRUCTION.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Sept. 1892.	Remarks.
		Rs. a. p.	
5th Nov. 1890 ...	31st August 1892	97,251 0 0	Work of laying pipes under first contract completed and accounts settled; additional pipes are being laid.
3rd Sep. 1891...	3rd March 1892...	51,099 0 0	Work of laying pipes completed; final accounts are to be adjusted. Rs. 7,164 transferred to meet the cost of connections at Chinchpokli between Tansa and Vehar mains.
Mar. 1891 ...	31st Mar. 1893 ...	33,541 0 0	Balance of the grant transferred to work of repairing, distributing and settling basins, Corporation Resolution No. 6259, 3rd September 1891, and work of repointing walls of the distributing basin completed by Indian Patent Stone Company. It is now proposed to utilize the balance of the grant for covering the floor of the distributing basin with Indian patent stone and for other works in that basin.
Dec. 1891 ...	31st Dec. 1892 ...	.....	Balance of Rs. 1,292 out of the grant of Rs. 25,000 for constructing store-room and offices and filling compound at Water Works Stores, available for this work, which has been commenced.
11th Mar. 1892...	6th July 1892 ...	9,388 0 0	Work in progress.
May 1892...	31st Oct. 1892 ...	252 0 0	Contracts let; works in progress.
Do. ...	Do. ...	347 0 0	
Do. ...	Do. ...	2,057 0 0	
Do. ...	Do. ...	2,394 0 0	
Not commenced yet.	31st May 1894 ...	.....	Contracts are being prepared.
Do. ...	Do. ...	.....	
.....	31st Oct. 1892 ...	3,798 0 0	This was sanctioned out of savings in the grant for the Queen's Road 24" main.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS.				
WORKS COMPLETED.				
13. Queen's Road and Girgaum sewerage and house connection works.	11,14,929	Cur. rev...	28th July 1887 ...	28th July 1887...
14. Storm-water drain in Jagannath Sadashiv Street.	2,170	Do. ...	9th Feb. 1891 ...	1st Mar. 1891 ...
15. Storm-water connection at the junction of DeLisle and Arthur Roads.	114	Do. ...	Do. ...	Do. ...
16. New latrine at Bandora Slaughter House.	3,919	Do. ...	23rd Jan. 1890 ...	1st Mar. 1890 ..
17. Ventilating Shafts, Marine Lines, Mayo and Queen's Roads.	6,750	Do. ...	1st Mar. 1888 ..	1st Mar. 1888 ..
18. Altering connection of main drain with main sewer at Bellasis Bridge.	1,100	Do. ...	16th Jan. 1889 ...	1st March 1889...
19. Construction of a 12″ pipe sewer in continuation of the Arthur Road 15″ pipe sewer.	2,956	Do. ...	11th May 1891 ...	11th May 1891 ...
20. Constructing a three-chamber latrine on the water system in Victoria Gardens.	1,396	Surplus cash balance.	3rd Dec. 1891 ...	3rd Dec. 1891 ...
21. Six-chamber latrine and six-chamber urinals in Gilder Street at the junction of Falkland Road and Gilder Street.	4,180	Cur. rev.	9th Feb. 1891 ...	1st Mar. 1891 ...
22. Four-chamber urinal in 2nd Bhoiwada Street.	524	Do. ...	Do. ...	Do. ...
WORKS IN PROGRESS.				
23. House connections without privy fittings in the first sections of Drainage Scheme.	(a) 5,78,611-14-4	Loan ...	8th Dec. 1881 ...	5th May 1885 ...
24. Automatic flushers at heads of gullies ...	5,570	Do. ...	Do. ...	.....

(a) House connections without privy fittings ... ...
Add—Transferred from Argyle Road, Standing Committee's Resolution No. 5192,

Less—Amount transferred to meet excess on Pumping Engines, Town Council

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Sept. 1892.	Remarks.
		Rs. a. p.	
Nov. 1888...	1st Feb. 1891 ...	8,76,635 10 3	Work entrusted to Messrs. Bulkley & Co. and completed on 12th May 1891. Final accounts with them are adjusted. Some portion is being carried out departmentally.
20th Nov. 1891...	29th Feb. 1892 ...	535 8 8	Work completed by petty work contractors. Final bill forwarded for sanction.
5th Feb. 1892 ...	Do. ...	46 14 9	Work completed by petty work contractors. Bill passed.
4th Jan. 1891...	31st Dec. 1891 ...	2,721 4 5	Work completed, bill passed.
7th Nov. 1888...	31st Mar. 1892 ...	3,763 4 5	Work completed by petty work contractors, accounts to be adjusted.
11th Dec. 1891...	15th June 1892 ...	1,028 2 1	Work completed departmentally.
15th May 1891 ..	30th June 1892...	.....	Work completed. Accounts to be adjusted.
10th Jan. 1892...	15th Aug. 1892...	72 8 11	Work completed by petty work contractors. Bill not passed.
2nd Jan. 1892...	29th Feb. 1892...	293 14 2	Work completed by petty work contractors. Accounts are to be adjusted.
13th April 1891...	10th Nov. 1891...	.....	Work completed by petty work contractors. Accounts are to be adjusted.
{ 8th Jan. 1887 { 25th Jan. 1892	{ 31st July 1888 { 31st July 1893	2,20,672 0 0	Khetwadi section of the work is done, other portions in progress.
Do.	Do.	.....	A contract for supply of iron materials at a cost of Rs. 1,53,858 has been carried out. Work ordered to be proceeded with departmentally, but stopped pending decision of Corporation as regards house-connections in general.

... ...	Rs.	5,71,165 0 0
dated 20th June 1888	„	19,046 14 4
	Total, Rs.	5,90,211 14 4
Resolution No. 52, dated 13th January 1882	„	—11,600 0 0
	Rs.	5,78,611 14 4

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS—(*contd.*).				
WORKS IN PROGRESS—(*contd.*).				
25. New latrines and urinals	25,422-13-0	Cur. rev...	16th Oct. 1889 ...	16th Oct. 1889 ...
26. Diverting pipe sewers along the site of the proposed overbridge at Falkland Road to allow the construction of the Bridge.	10,338	Do. ...	28th Aug. 1890...	28th Aug. 1890...
27. House connections in Agripada District.	2,48,642	Loan	8th Oct. 1888 ...	1st July 1890 ..
28. Arrangements for flushing Parel and Bellasis Road storm-water drain from Babula Tank and Nagpada Tank.	3,844	Cur. rev...	23rd Jan. 1890 ...	1st Mar. 1890 ...
29. Construction of sewer flushing arrangements.	14,000	Loan ...	Do. ...	Do. ...
30. Closing up with cast-iron the perforations in manhole covers.	4,000	Cur. rev....	9th Feb. 1891 ...	1st Mar. 1891 ...
31. Construction of pipe sewers in Parel Village Main Road and Government House Road, Parel.	77,603	Loan ...	14th Jan. 1892 ...	14th Jan. 1892 ...
32. Constructing pipe sewers and metal vent shafts in Parel village.	20,852	Do. ...	25th Feb. 1892...	25th Feb. 1892 ...
33. Construction of a storm-water drain in Hornby Road from the Salvation Army Hall to Bazar Gate Street.	21,598	Do. ...	6th Apr. 1892 ...	6th Apr. 1892...
34. Constructing a new drain in Walkeshwar village to receive the drainage of Ambewadi and connect it with the pipe drain running from the Municipal latrine on the foreshore.	2,296	Cur. rev...	Budget for 1892-93.	1st Mar. 1892 ...
WORKS TO BE COMMENCED.				
35. Filling and pitching slope of portion of Haines Road forming boundary of the storm-water reservoir.	4,888	Cur. rev...	16th Jan. 1889 ...	16th Jan. 1889 ...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Sept. 1892.	Remarks.
		Rs. a. p.	
6th Dec. 1889...	.....	4,831 10 0	Portion of the work entrusted to petty work contractor.
1st Nov. 1890...	.....	5,428 3 2	The work is being executed departmentally, but now stopped pending acquisition of land.
20th Oct. 1890 ...	15th Oct. 1892 ...	1,81,423 0 0	Tender of Mr. Sitaram Lakshman accepted, contract signed on 13th October 1890, and the work commenced on 20th October 1890.
21st Apr. 1891 ...	.....	925 0 0	The work at Babula Tank is completed.
20th Sept. 1891..	31st Dec. 1892 ...	7,229 1 2	Work being executed departmentally.
1st Oct. 1891...	.....	260 15 11	Work entrusted to Messrs. Richardson & Cruddas and is in progress; the probable time of completion cannot be fixed.
26th Apr. 1892...	22nd Jan. 1893...	7,272 0 0	Tender of Messrs. Vishnu Narsingrao & Co. accepted. Contract signed on 21st April 1892 and the work commenced on 26th April 1892.
5th July 1892...	15th Feb. 1892...	567 0 0	Messrs. Vishnu Narsingrao & Co.'s contract has been executed, and the work is now in progress.
Do. ...	24th Nov. 1892...	826 0 0	Messrs. Vishnu Narsingrao & Co.'s contract has been executed, and the work is now in progress.
.....	.....	1,575 1 1	Work being executed departmentally.
.....	.....	294 0 0	Work not undertaken, pending consideration of Mr. Baldwin Latham's report. Some quantity of rubble deposited on the bank that it may not be washed away.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS—(*contd.*).				
WORKS TO BE COMMENCED—(*contd.*).				
36. Arching over main drain at Arthur Road Crossing.	18,000	Loan ...	14th Jan. 1892 ...	14th Jan. 1892 ...
37. Vent shafts on Ripon Road sewer ...	3,047	Cur. rev...	Budget for 1892-93.	1st Mar. 1892 ...
38. Latrines and urinals ...	12,000	Do. ...	Do. ...	Do. ...
III.—ROADS, BUILDINGS, &c.				
WORKS COMPLETED.				
39. Converting the chunam shed at Charni Road chauki into a new chauki.	761	Do. ...	9th Feb. 1891 ...	1st Mar. 1891 ...
40. Chawl of 17 rooms at Love Grove ...	9,367	Do. ...	Do. ...	Do. ...
41. Covering with corrugated iron roofing part of the passage between Bori Bunder Stables and Workshops as a shelter for hearses and vans.	1,632	Do. ...	Budget for 1892-93.	1st Mar. 1892 ...
WORKS IN PROGRESS.				
42. Night-soil depôt near the junction of DeLisle and Parbhadevi Roads.	26,394	Do. ...	25th Apr. 1888 ...	25th Apr. 1888...
43. Retaining wall extension, Walkeshwar Road.	9,150 5,000	Do. ...	16th Jan. 1889 ...	16th Jan. 1889 ...
44. Roads and streets in Agripada and elsewhere.	15,00,000	Loan	.....	.....
45. Halalkores' chawls in Cursetji Suklaji's Street.	86,000	35 Lakhs Loan.	23rd Jan. 1890.	Nov. 1890 ...
46. Building a new bungalow for the Victoria Gardens Superintendent.	14,203	Cur. rev...	16th July 1891...	16th July 1891...
47. Erecting a refreshment room in the Victoria Gardens.	2,727	Do. ...	Do. ...	Do. ...
48. Foras Road Market	50,000	Loan ...	17th April 1890...	25th Sept. 1890...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Sept. 1892.	REMARKS.
		Rs. a. p.	
.....	.....	.....	Work is to be taken in hand after the S.-W. Monsoon. The plans and estimates are ready and the contract is being prepared.
.....	.....	.....	The work was delayed owing to the rains. It will shortly be taken in hand.
.....	.....	184 8 0	Contract for latrines and urinals at Erskine Road, Picket Road, and Mazagon Road given to Messrs. Mistri and Bhedwar, and tender for the construction of latrines and urinals at Mumbadevi Road and Jakeria Musjid Street has recently been accepted.
1st Nov. 1891 ...	5th Jan. 1892 ...	431 7 11	Work completed by petty work contractors. Bill passed.
20th Feb. 1892...	20th Aug. 1892...	7,348 4 3	Work entrusted to Messrs. Gangaram Lakshman & Co. (nearly completed).
.....	.....	.....	Work entrusted to petty works contractors and nearly completed.
13th May 1892 ...	.....	12,543 9 3	The work which is entrusted to Messrs. Spencer & Co. is in progress.
14th Jan. 1892...	20th Mar. 1892...	8,972 5 5	Work in progress departmentally. It is stopped at present, but will be recommenced after the rains.
.....	... ..	7,90,280 3 4	Lines of roads are marked and sanctioned. The land for the Agripada District is being gradually acquired. When a sufficient area has been obtained the construction of the streets will be taken in hand. The extent of land to be acquired is large, and though the operation of acquisition is difficult, yet it is proceeding with all the expedition possible.
19th June 1891...	30th Oct. 1892 ...	69,641 10 2	Work (entrusted to Messrs. Framji & Jewanji) in progress.
15th Jan. 1892 ...	15th July 1892 ...	10,513 1 6	Work entrusted to Messrs. Bhedwar & Co. The original contract work completed.
21st Jan. 1892 ...	21st May 1892 ...	869 5 9	Work entrusted to Mr. Mukandrao Limbaji, and is still in progress, though the contract time has expired.
.....	... ..	495 10 8	Work entrusted to Messrs. Pallonji & Littlewood, and is in progress.

BOMBAY MUNICIPALITY.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
III.—ROADS, BUILDINGS, &c.—(*contd.*)				
WORKS IN PROGRESS.—(*contd.*)				
49. Constructing a Mangalore tiled roof over the Small-pox Hospital at Arthur Road.	5,633	Cur. rev....	Budget for 1892-93.	1st Mar. 1892 ...
WORKS TO BE COMMENCED.				
50. New Market at Colaba.....	{ 50,300 50,000	Loan	26th Mar. 1888...	26th Mar. 1888 ...
51. Purchase of land for chawls for the biggaris who clean the Arthur Crawford Market and building the chawls.	22,700	Do. ...	25th April 1888...	25th April 1888...
52. Purchase of 11,838 sq. yds. of land at DeLisle and Arthur Roads Junction.	23,676	Do. ...	26th Mar. 1888...	26th Mar. 1888...
53. Road through Nowrojee Hill from Elphinstone Bridge to Dongri Street.	3,32,023	Do. ...	Do. ...	Do. ...
54. Extension of the Mutton Markets, &c., Crawford Market.	49,942	Do. ...	Do. ...	Do. ...
55. Extension of Bhuleshwar Market	4,50,000	Do. ...	9th July 1888 ...	9th July 1888 ...
56. Construction of Engineer's quarters at Love Grove pumping station.	12,009	Cur. rev....	Budget for 1892-93.	1st Mar. 1892 ...
57. Filling in Municipal ground and building a retaining wall in front of house of Mr. Jaikisondas Gangadas at Walkeshwar Road.	4,743	Do. ...	Do. ...	Do. ...
58. Fencing Municipal ground at Dadar ...	572	Do. ...	Do ...	Do. ...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Sept. 1892.	Remarks.
		Rs. a. p.	
.....	.....	205 14 4	This work, which is entrusted to Messrs. Warden & Co., is in progress.
.....	.....	50,250 0 0	Site acquired and plans are being prepared.
.....	.....	.....	It is proposed to build the chawls on the Municipal ground on the east of the Health Department bullock stables at Paltan Road.
.....	.....	.....	Owner unwilling to sell.
.....	.....	75 0 0	Negotiations at a stand still.
.....	.....	429 9 8	Tenders have been received for the work.
.....	.....	2,93,673 4 10	Land acquired; plans are being revised so as to curtail the estimated amount.
.....	.....	.....	Tenders have been received for the work.
.....	.....	.....	Question as to whether the owner of the adjoining stables has acquired right of light and air is under consideration and enquiry.
.....	.....	.....	Work to be commenced after the monsoons.

BOMBAY MUNICIPALITY.

PROGRESS REPORTS UP TO THE END OF DECEMBER 1892

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
I.—WATER WORKS.				
WORKS COMPLETED.				
1. Additional water mains	1,00,000	Loan	23rd Jan. 1890	1st March 1890.
2. Latrines and urinals for workmen at Chinchpokli stores.	1,063	Cur. rev.	4th Feb. 1892	1st March 1892.
3. Chauki for watchmen and other minor improvements at Bhundarwada Reservoir.	430	Do.	Do.	Do.
4. Fencing new ground at Chinchpokli and western boundary of old ground	2,600	Do.	Do.	Do.
5. Alteration of Engine-house, Malabar Hill Reservoir, to provide quarters for Inspector.	3,500	Do.	Do.	Do.
WORKS IN PROGRESS.				
6. Repairs at Bhundarwada Reservoir	65,500+ 5408 1-3	Cur. rev.	23rd Jan. 1890	1st March 1890.
7. Stove and tank for dipping pipes at the Water Works Stores.	1,292	Do.	26th May 1887	26th May 1887.
8. Repairs, Tulsi Main Embankment	22,000 13,000 35,000	Do.	14th Jan. 1892. 27th Jan. 1892.	14th Jan. 1892 1st March 1892
9. Connection at Chinchpokli between Tansa and Vehar mains.	7,164	Loan	16th June 1892	16th June 1892.
10. Shed for pipe cutting machine at Chinchpokli Work, to be commenced.	2,200	Cur. rev.	4th July 1892	4th July 1892
11. Covering storage basin at the Bhundarwada Reservoir and constructing filter over it.	44,597	Loan	14th Jan. 1892	14th Jan. 1892.
12. Residence for Chief Inspector (W. W.) at Babula Tank Road and rooms for six sluicemen.	46,360	Do.	Do.	Do.
13. Laying main in Cavel Street	606	Cur. rev.	18th Aug. 1892	18th Aug. 1892.

OF NEW WORKS NOW IN COURSE OF CONSTRUCTION.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Dec. 1892. Rs. a. p.	Remarks.
5th Nov. 1890...	31st Aug. 1892...	98,386 0 10	Work completed. Final bills submitted for sanction.
May 1892 ...	31st Oct. 1892 ...	252 0 0	Works completed. Final accounts are to be settled.
Do. ...	Do. ...	847 0 0	
Do. ...	Do. ...	2,057 0 0	
Do. ..	Do. ...	2,394 0 0	
Mar. 1891 ...	31st Mar. 1893 ...	61,487 1 3	Balance of the grant transferred to work of repairing, distributing and settling basins, Corporation Resolution No. 6259, 3rd September 1891, and work of repointing walls of the distributing basin completed by Indian Patent Stone Company. It is now proposed to utilize the balance of the grant for covering the floor of the distributing basin with Indian patent stone and for other Works in that basin, the first part of which has been completed.
Dec. 1891 ...	31st Mar. 1893 ...	.....	Balance of Rs. 1,292 out of the grant of Rs. 25,000 for constructing store-room and offices and filling compound at Water Works Stores, available for this work, which has been commenced.
14th Mar. 1892 ...	6th July 1893 ..	10,072 14 6	Work in progress.
May 1892 ...	31st Oct. 1892 ...	3,813 0 0	The work is being carried out departmentally.
6th July 1892...	31st Jan. 1893 ...	.....	Work in progress.
Not commenced yet.	31st May 1894 ...	.....	
Do. ...	Do. ...	.....	Contracts are being prepared.
.....	31st Jan. 1893 ...	.....	Work about to be commenced.

BOMBAY MUNICIPALITY.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS.				
WORKS COMPLETED.				
14. Queen's Road and Girgaum sewerage and house connection works.	11,14,929	Cur. rev. ..	28th July 1887 ...	28th July 1887 ...
15. Storm-water drain in Jagannath Sadashiv Street.	(a) 2,300-2-6	Do. ...	9th Feb. 1891...	1st Mar. 1891 ...
16. Ventilating shafts, Marine Lines, Mayo and Queen's Roads.	6,750	Do. ...	1st Mar. 1888...	1st Mar. 1888 ...
17. Construction of a 12" pipe sewer in continuation of the Arthur Road 15" pipe sewer.	2,956	Do. ...	11th May 1891...	11th May 1891...
18. Constructing a three-chamber latrine on the water system in Victoria Gardens.	1,396	Surplus cash balance.	3rd Dec. 1891 ...	3rd Dec. 1891 ...
19. Six-chamber latrine and six-chamber urinals in Gilder Street at the junction of Falkland Road and Gilder Street.	4,180	Cur. rev....	9th Feb. 1891 ...	1st Mar. 1891 ...
20. Four-chamber urinal in 2nd Bhoiwada Street.	524	Do. ...	Do. ...	Do. ...
21. Four-chamber urinal at the corner of Khoja Street and Grant Road.	480	Do. ...	23rd Jan. 1890 ...	1st Mar. 1890 ...
WORKS IN PROGRESS.				
22. House connections without privy fittings in the first sections of Drainage Scheme.	(b) 5,78,611-14-4	Loan	8th Dec. 1881 ...	5th May 1885 ...
23. Automatic flushers at heads of gullies..	5,570	Do. ...	Do. ...	.....

(a) Sanctioned grant ... ... Rs. 2,170 0 0

Add—Amount transferred to meet excess on this work ,, 130 2 6

Total, Rs. 2,300 2 6

(b) House connections without privy fittings ... ...

Add—Transferred from Argyle Road, Standing Committee's Resolution No. 5192,

Less—Amount transferred to meet excess on Pumping Engines, Town Council

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Dec. 1892.	Remarks.
		Rs. a. p.	
Nov. 1888...	1st Feb. 1891...	8,77,409 0 0	Work entrusted to Messrs. Bulkley & Co. and completed on 12th May 1891. Final accounts with them are adjusted. Some portion is being carried out departmentally.
20th Nov. 1891...	29th Feb. 1892...	2,248 12 7	Work completed by petty work contractors. Accounts adjusted.
7th Nov. 1888...	31st Mar. 1892 .	5,903 3 2	Work completed by petty work contractors. Accounts adjusted.
15th May 1891...	30th June 1892...	2,050 15 7	Work completed. Accounts adjusted.
10th Jan. 1892 .	15th Aug. 1892...	1,016 8 11	Work completed by petty work contractors. Accounts adjusted.
2nd Jan. 1892...	29th Feb. 1892...	3,713 0 11	Do. do. do.
13th April 1891...	10th Nov. 1891...	.....	Work completed by petty work contractors. Accounts are to be adjusted.
.....	.....	52 5 1	Do. do. do.
8th Jan. 1887 25th Jan. 1892	31st July 1888 31st July 1893	2,28,412 0 0	Khetwadi section of the work is done, other portions in progress. A contract for supply of iron materials at a cost of Rs. 1,53,853 has been carried out.
Do.	Do.	.....	Work ordered to be proceeded with departmentally, but stopped pending decision of Corporation as regards house-connections in general.

... ...	Rs. 5,71,165 0 0
dated 20th June 1888	„ 19,046 14 4
	Total Rs. 5,90,211 14 4
Resolution No. 52, dated 13th January 1882...	„ —11,600 0 0
	Rs. 5,78,611 14 4

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS—(contd.)				
WORKS IN PROGRESS—(contd.)				
24. New latrines and urinals	25,422-13-0	Cur. rev..	16th Oct. 1889 ...	16th Oct. 1889 ...
25. Diverting pipe sewers along the site of the proposed overbridge at Falkland Road to allow the construction of the Bridge.	10,338	Do.	28th Aug. 1890...	28th Aug. 1890 ...
26. House connections in Agripada District	2,48,642	Loan	8th Oct. 1888 ...	1st July 1890 ...
27. Arrangements for flushing Parel and Bellasis Road storm-water drain from Babula Tank and Nagpada Tank.	3,844	Cur. rev...	23rd Jan. 1890 ...	1st Mar. 1890 ...
28. Construction of sewer flushing arrangements.	14,000	Loan	Do. ...	Do. ...
29. Closing up with cast-iron the perforations in manhole covers.	4,000	Cur. rev..	9th Feb. 1891 ...	1st Mar. 1891..
30. Construction of pipe sewers in Parel Village Main Road and Government House Road, Parel.	77,603	Loan	14th Jan. 1892 ...	14th Jan. 1892 ...
31. Constructing pipe sewers and metal vent shafts in Parel village.	20,852	Do. ...	25th Feb. 1892 ...	25th Feb. 1892...
32. Construction of a storm-water drain in Hornby Road from the Salvation Army Hall to Bazar Gate Street.	21,598	Do. ...	6th Apr. 1892 ...	6th Apr. 1892...
33. Constructing a new drain in Walkeshwar village to receive the drainage of Ambewadi and connect it with the pipe drain running from the Municipal latrine on the foreshore.	2,296	Cur. rev...	Budget for 1892-93.	1st Mar. 1892 ...
34. Experimental Drainage Works.	10,000	Sur. cash balance.	8th Sept. 1892...	8th Sept. 1892...
35. Construction of latrines in the Municipal Workshops Storeyard.	1,305	Cur. rev...	23rd Jan. 1890...	1st Mar. 1890...
36. Providing vent shafts on Queen's Road sewer between 1st Mariue Street and Forns Road.	1,860	Sur. cash balance.	18th Aug. 1892...	18th Aug. 1892...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Dec. 1892.	Remarks.
		Rs. a. p.	
6th Dec. 1889 ...	.....	4,831 10 0	Portion of the works entrusted to petty work contractor.
1st Nov. 1890 ...	.....	5,428 8 2	The work is being executed departmentally, but now stopped pending acquisition of land.
20th Oct. 1890 ...	15th Oct. 1892 ...	2,22,261 0 0	The whole of the contract work was completed before 30th September 1892, except connections to two houses and five vent shafts. House connection work is stopped in accordance with Corporation Resolution No. 3142, dated 30th June 1892.
21st Apr. 1891 ...	.....	2,859 10 1	The work at Babula Tank is completed.
20th Sept. 1891...	31st Dec. 1892 ...	7,858 0 0	Work is being executed departmentally.
1st Oct. 1891 ...	.....	653 4 0	Work entrusted to Messrs. Richardson & Cruddas and is in progress; the probable time of completion cannot be fixed.
26th Apr. 1892 ...	22nd Jan. 1893 ...	9,553 12 11	Tender of Messrs. Vishnu Narsingrao & Co. accepted. The work is in progress.
5th July 1892 ...	15th Feb. 1892 ...	1,074 0 0	Messrs. Vishnu Narsingrao & Co.'s contract has been executed, and the work is now in progress.
Do. ...	24th Nov. 1892 ...	3,819 0 0	Messrs. Vishnu Narsingrao & Co.'s contract has been executed, and the work is in progress.
.....	.....	1,718 6 7	Work being executed departmentally; nearly completed.
30th Nov. 1892...	.....	140 0 0	Work is being carried out departmentally.
.....	.....	449 14 11	Work completed by petty works contractors; some additional works are being executed.
.....	.....	1,855 14 6	Work is being carried out departmentally; nearly completed.

BOMBAY MUNICIPALITY.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
	Rs.			
II.—SEWERAGE, SURFACE DRAINAGE AND HOUSE CONNECTIONS—(*contd.*)				
WORKS IN PROGRESS—(*contd.*)				
37. Construction of Engine and Boiler-house at Love Grove.	1,40,000	Loan	8th Sept. 1892...	8th Sept. 1892..
WORKS TO BE COMMENCED.				
38. Filling and pitching slope of portion of Haines Road forming boundary of the storm-water reservoir.	4,888	Cur. rev....	16th Jan. 1889 ...	16th Jan. 1889 ...
39. Arching over main drain at Arthur Road Crossing.	18,000	Loan ...	14th Jan. 1892 ...	14th Jan. 1892 ...
40. Vent shafts on Ripon Road sewer ...	3,047	Cur. rev....	Budget for 1892-93.	1st Mar. 1892 ...
41. Latrines and urinals ...	(*a*) 16,562	Do. ...	Do. ...	Do. ...
III.—ROADS, BUILDINGS, &c.				
WORKS COMPLETED.				
42. Chawl of 17 rooms at Love Grove ...	9,367	Do. ...	9th Feb. 1891 ...	1st Mar. 1891 ...
43. Covering with corrugated iron roofing part of the passage between Bori Bunder stables and workshops as a shelter for hearses and vans.	1,632	Do. ...	Budget for 1892-93.	1st Mar. 1892 ...
WORKS IN PROGRESS.				
44. Night-soil depôt near the junction of DeLisle and Parbhadevi Roads.	26,394	Do. ...	25th Apr. 1888 ...	25th Apr. 1888 ...
45. Retaining wall extension, Walkeshwar Road.	{ 9,150 5,000 }	Do. ...	16th Jan. 1889 ...	16th Jan. 1889 ...
46. Roads and streets in Agripada and elsewhere.	15,00,000	Loan ...	.....	.....

(*a*) Budget grant ... ...Rs. 12,000
Add—Additional grant sanctioned for the latrine to be erected in the Kennedy Seaface Garden... ... ... ,, 4,562
Total... ...Rs. 16,562

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Dec. 1892.				Remarks.
		Rs.	a.	p.		
10th Oct, 1892 ...	1st June 1893 ...	2,56,737	14	3		Messrs. Sitaram Lakshman and Bibra's contract executed. The work is in progress.
.....	.....	294	0	0		Tenders have been invited for the work.
.....	.....	110	0	0		Tender of Messrs. Mistri, Bhedwar and Vachagandhy has been accepted.
.....	.....	35	0	0		Tenders have been received for the work.
.....	.....	4,765	7	2		Contract for latrines and urinals at Erskine Road, Picket Road, and Mazagon Road and Jakaria Musjid Street given to Messrs. Mistri and Bhedwar, and the work of construction of latrines and urinals at Mumbadevi Road is stopped as per the Commissioner's recent orders. Tenders have been received for latrines and urinals in Kennedy Seaface Gardens.
20th Feb. 1892...	20th Aug. 1892...	8,310	6	3		Work completed by Messrs. Gangaram Lakshman & Co. A one chamber water system latrine for the chawl is being constructed.
.....	.....	1,200	3	4		Work completed by petty works contractors.
13th May 1892...	10th Jan. 1893 ...	17,325	9	2		The work which is entrusted to Messrs. Spencer & Co. is nearly completed.
14th Jan. 1892...	20th Mar. 1892...	8,972	5	5		Work in progress departmentally. It is stopped at present, but will be recommenced after the rains.
.....	.....	7,99,636	12	10		Lines of roads are marked and sanctioned. The land for the Agripada District is being gradually acquired. When a sufficient area has been obtained the construction of the streets will be taken in hand. The extent of land to be acquired is large, and though the operation of acquisition is difficult, yet it is proceeding with all the expedition possible.

BOMBAY MUNICIPALITY.

Name and Description of Work or Grant.	Amount of Grant.	Fund to which Grant is debitable.	Date when Grant was sanctioned by the Corporation.	Date when Grant became available.
III.—ROADS, BUILDINGS, &c.—(*contd.*)				
WORKS IN PROGRESS.—(*contd.*)				
47. Halalkores' chawls in Cursetji Suklaji's Street.	86,000	35 Lakhs Loan.	23rd Jan. 1890.	Nov. 1890 ...
48. Building a new bunglow for the Victoria Gardens Superintendent.	14,203	Cur. rev....	16th July 1891 ...	16th July 1891 ...
49. Erecting a refreshment room in the Victoria Gardens.	2,727	Do. ...	Do. ...	Do. ... ...
50. Foras Road Market ...	50,000	Loan ...	17th April 1890...	25th Sept. 1890...
51. Constructing a Mangalore tiled roof over the Small-pox Hospital at Arthur Road.	5,633	Cur. rev...	Budget for 1892-93.	1st Mar. 1892...
52. Reconstructing of portion of Gibbs Road.	46,200	Surplus cash balance.	10th Nov. 1892...	10th Nov. 1892...
53. Extension of the Mutton Markets, &c., Crawford Market.	49,942	Loan	26th Mar. 1888.	26th Mar. 1888 ...
54. Construction of Engineer's quarters at Love Grove pumping station.	12,009	Cur. rev ...	Budget for 1892-93.	1st Mar. 1892....
55. New Market at Colaba	50,300 50,000	Loan	26th Mar. 1888 ..	26th Mar. 1888 ...
WORKS TO BE COMMENCED.				
56. Purchase of land for chawls for the biggaris who clean the Arthur Crawford Market and building the chawls.	22,700	Loan ...	25th Apr. 1888 ...	25th Apr. 1888 ...
57. Purchase of 11,838 sq. yds. of land at DeLisle and Arthur Roads Junction.	23,676	Do. ...	26th Mar. 1888 ...	26th Mar. 1888...
58. Road through Nowrojee Hill from Elphinstone Bridge to Dongri Street.	3,32,023	Do. ...	Do. ...	Do. ...
59. Extension of Bhuleshwar Market	4,50,000	Do. ..	9th July 1888...	9th July 1888 ...
60. Filling in Municipal ground and building a retaining wall in front of house of Mr. Jaikisondas Gangadas at Walkeshwar Road.	4,743	Cur. rev ...	Budget for 1892-93.	1st Mar. 1892....
61. Fencing Municipal ground at Dadur....	572	Do. ...	Do. ...	Do. ...

APPENDICES TO RECORD.

Date of commencement of the Work.	Probable Date of completion of the Work.	Certified Expenditure up to the end of Dec. 1892.	Remarks.
		Rs. a. p.	
19th June 1891 ...	30th Oct. 1892 ...	75,202 6 0	Work (entrusted to Messrs. Framji & Jewanji) in progress.
15th Jan. 1892 ...	15th July 1892...	10,513 1 6	Work entrusted to Messrs. Bhedwar & Co. The original contract work completed.
21st Jan. 1892 ...	21st May 1892 ...	1,902 13 5	Work entrusted to Mr. Mukandrao Limbaji, and is still in progress, though the contract time has expired.
.....	.....	876 7 11	Work entrusted to Messrs. Pallonji & Littlewood, and is in progress.
.....	.....	205 14 4	This work, which is entrusted to Messrs. Warden & Co., is in progress.
.....	.....	4,275 7 6	
.....	.....	1,114 2 11	Tenders have been received for the work. Work in progress.
7th Nov. 1892...	8th March 1893.	804 14 5	The work is in progress.
.....	.....	50,250 0 0	Site acquired and plans and estimates have been prepared.
.....	.....	.....	It is proposed to build the chawls on the Municipal ground on the east of the Health Department bullock stables at Paltan Road.
.....	.....	.....	Owner unwilling to sell.
.....	.....	75 0 0	Negotiations at a standstill.
.....	.....	2,93,878 12 10	Land acquired; plans are revised so as to curtail the estimated amount.
.....	.....	.....	Tenders have been invited for this work.
.....	.....	.....	Work to be commenced after the monsoons.

Appendix E.

BOMBAY, *8th July* 1892.

AT a meeting of the Committee of the Corporation, appointed on the 30th June 1892, as per margin, held this day, there were present, Javerilal U. Yajnik, Esq., President; Ardasir D. Mody, Esq.; Lt.-Col. Brigade-Surgeon S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; D. A. D'Monte, Esq.; Furdoonji N. Bisni, Esq.; Framji D. Divecha, Esq.; W. C. Hughes, Esq.; Meherjibhai R. Setna, Esq.; Muncherji C. Murzban, Esq.; Nanabhai N. Katrak, Esq.; Pherozeshah M. Mehta, Esq.; Rahimtula M. Sayani, Esq.; Accacio G. Viegas, Esq.

"That the work of constructing house-connections in the City be stayed till the Corporation have enquired into the sanitary effect of those already constructed."

No. 3142.

"That a Committee, composed of the following gentlemen, be appointed, for the purpose of enquiring into the sanitary effect of the house-connections already constructed and of reporting thereon, and of suggesting such remedies as may appear desirable or necessary :—

THE PRESIDENT; ABDALLA M. DHARAMSI, Esq.; ARDASIR D. MODY, Esq.; Lt.-Col. Brig.-Surg. S. O'B. BANKS; BHALCHANDRA K. BHATAWADEKAR, Esq.; THOMAS BLANEY, Esq.; COWASJEE HORMUSJEE, Esq.; COWASJI PESTONJI, Esq.; D. A. D'MONTE, Esq.; FURDOONJI N. BISNI, Esq.; FRAMJI D. DIVECHA, Esq.; W. C. HUGHES, Esq.; K. N. KABRAJI, Esq.; Lt.-Col. Brig.-Surg. G. A. MACONACHIE; MEHERJIBHAI R. SETNA, Esq.; MUNCHERJI C. MURZBAN, Esq.; NANABHAI N. KATRAK, Esq.; PHEROZESHAH M. MEHTA, Esq.; ACCACIO G. VIEGAS, Esq.; R. M. SAYANI, Esq. The MUNICIPAL COMMISSIONER.

"That the Committee be empowered to call for papers or to take evidence.

"Six to form a quorum and the President to be Chairman."

H. A. Acworth, Esq., C. S., Commissioner; the Health Officer; the Acting Executive Engineer; and the Secretary.

Read letter, dated 7th instant, from Brigade-Surgeon Lieut.-Colonel Maconachie stating that he would be unable to attend this meeting, as it is called for the hour at which he has to lecture at the Grant Medical College.

Read letter of same date from Mr. Cowasjee Hormusjee, stating his regret that on account of ill-health and other calls on his time, he is not able to serve on this Committee.

It was agreed that the Secretary be requested to prepare a statement containing Resolutions of the Corporation, of the late Town Council and the Standing Committee, with reference to the question of house-connections, the same being prefaced with such portion of the Report of Dr. Hunter's Committee on the drainage and sewerage of Bombay as relates to the question of house-connections.*

It was further agreed that the Acting Executive Engineer be asked to produce before the Committee all the written complaints received in his office relative to house-connections.

* See Accompaniment E at end of this Appendix.—H. W. B.

Examination of Mr. JAMES W. SMITH, M.I.C.E., *Acting Executive Engineer, by the Municipal Commissioner for the City of Bombay.*

Q.—You are the Acting Executive Engineer and have been connected with the House Connection Work since it was first begun on a scientific system?

A.—Yes.

Q.—The house connections in Kamathipura were the first which could be properly spoken of as scientific?

A.—Yes.

Q.—Does that model (pointed out) represent the system of house connections adopted in Kamathipura?

A.—Yes. I think, in a general sense, it does.

Q.—That is to say, the principle was one in the first instance of a threefold trap,—one cutting off the house drain from the pipe sewer?

A.—Yes.

Q.—The second what we call the gully-trap?

A.—Yes.

Q.—The third the wall siphon on the wall of the house outside the nahni?

A.—Yes.

The Commissioner here explained the model to the members of the Committee, pointing out how the water from the nahni first passes through the wall siphon, then down the down-take pipe into the gully-trap, through that into the house drain, and from that through the running siphon into the street sewer.

The Commissioner also explained the situation of the ventilating shafts.

Q.—Throughout Kamathipura every down-take pipe in a house gully discharges into a gully-trap?

A.—Yes.

Q.—Are you sure that every nahni has got a siphon outside the wall?

A.—No, I am not sure.

Q.—Then you think that in certain cases the model is departed from?

A.—Yes.

Q.—Do you know why?

A.—Because the people used to throw all kinds of sweepings and rubbish out into the cistern head connected with the wall siphon, which choked the latter.

Q.—In the majority of the cases, the wall siphons were adhered to?

A.—Yes, I think so.

Q.—In some cases they were not?

A.—They were not in some cases, but the gully-trap has been invariably adhered to.

Q.—That is to say, there is no case of a house in Kamathipura which has got less than two distinct water seals?

A.—In some cases where there is no house gully the gully-trap has been dispensed with, and the wall siphon is the only water seal between the nahni and the street sewer.

Q.—Then the connection to the pipe sewer would be through the wall siphon?

A.—Yes.

Q.—Are these cases numerous?

A.—No.

Q.—In cases where the connection has been by a wall siphon, have you received many complaints of nuisances?

A.—No, none.

Q.—Have you received complaints of choking in gully-traps?

A.—Yes, but many of them did not come to me officially. The people complained to the men on the work, and the chokes were attended to without any representation to the office.

Q.—The next place where house connections have been undertaken is Khetwadi?

A.—Yes.

Q.—Was the system there the same or was there any difference?

A.—The system was the same, but the wall siphons were omitted, except in the case of what was called roadside connections.

Q.—Where you could not introduce the gully-trap?

A.—Yes.

Q.—But there are a large number of wall siphons in Khetwadi?

A.—Yes.

Q.—I mean even in house gullies?

A.—Yes. In some house gullies there are a good many.

Q.—Then can you say why they were introduced in house gullies?

A.—On account of the long length of the pipes. Where the down-take pipes were long, a wall siphon was put in.

Q.—What is the size of a down-take pipe in diameter?

A.—2½ inches.

Q.—How much liquid will that pipe placed vertically discharge in a minute?

A.—350 gallons a minute.

Q.—What is the internal diameter of an iron cistern head?

A.—In the middle more than six inches.

Q.—The pipe from the nahni is also 2½ inches?

A.—Yes.

Q.—It is disconnected from the cistern head?

A.—Yes.

Q.—Are down-take pipes cut off from the gully-trap?

A.—Yes.

Q.—Is the down-take pipe always carried up to or above the roof so as to be a ventilating shaft?

A.—Where there are no siphons, they stop at the highest cistern head.

Q.—Why don't you carry them above that?

A.—You cannot do that where there is no wall siphon.

Q.—Why not?

A.—You will need a branch on to the down-take pipe, and without such a branch you will not be able to carry it further.

Q.—Have you received many complaints of gully-traps and siphons being choked in Khetwadi?

A.—Yes.

Q.—To your personal knowledge such complaints were received?

A.—Yes.

Q.—Then the next district is the Fort?

A.—Yes.

Q.—Here there is a partial system only, just sufficient to allow the sullage to pass into the new pipe sewers?

A.—Yes.

Q.—What is done?

A.—At the end of the house-gully there is a siphon placed, there is a ventilating pipe connected with the house drain between the street sewer and the siphon, and a gully-trap is placed at the end of the house gully.

Q.—The down-take pipes discharge into the house gully?

A.—Yes.

Q.—And the house gully discharges sullage first into a gully-trap and then into a running siphon?

A.—Yes.

Q.—Then this elaborate system of wall siphon and ventilating pipes does not exist in the Fort?

A.—No. It does not.

Q.—How do the down-take pipes convey the sullage?

A.—We have allowed the down-take pipes to remain as they were.

Q.—What is the diameter of those pipes?

A.—From 2 to 4 inches.

Q.—The system of house connections in the Fort is still in an embryo condition?

A.—Yes. I may mention that there are numerous drains passing through the houses and there we put gully-traps to the house drains.

Q.—I know that does exist especially in Bazaar Gate Street?

A.—Yes.

Q.—What is the system in Bazaar Gate Street?

A.—Most of the drains run through the houses. We put an air chamber at the end covered by a grating with a gully-trap in the bottom of the chamber.

Q.—And from the gully-trap they run to the sewer?

A.—Yes.

Q.—Do all these drains run through the houses?

A.—Yes. They are below the floor, they are square flat-bottomed drains made of masonry and are usually covered with stones badly jointed.

Q.—Do you think that satisfactory?

A.—No. Most unsatisfactory.

Q.—Are there any house gullies in Bazaar Gate Street?

A.—No.

Q.—So that there are no house connections introduced in Bazaar Gate Street, except in certain cases a gully-trap is placed outside the house?

A.—Yes.

Q.—The object being to exclude the sewer air from the house, but it does not prevent exhalations from the house drain?

A.—It does not.

Q.—Then the next district is the Queen's Road and Girgam Sewerage district which has just been finished by Messrs. Bulkley and Co. Now, it was while that work was being carried on that Mr. Baldwin Latham came to Bombay?

A.—Yes.

Q.—In carrying out the work in the Queen's Road and Girgam District, did you modify the system represented by that model?

A.—We omitted the wall siphons.

Q.—Universally?

A.—Yes, except where we could not introduce a gully-trap.

Q.—Do you know on what authority that was done?

A.—No. I do not know that there is any special authority.

Commissioner.—It was done, no doubt, in consultation between Mr. Ollivant and Mr. Walton. In the Queen's Road and Girgam District the wall siphons have been abandoned where their are gully-traps?

A.—Yes.

Q.—Do you know if any nuisance has been occasioned by the foul state of the down-take pipe which the wall siphon is intended to obviate?

A.—I think all the complaints arise from the fouling of the down-take pipes.

Q.—Complaints about smells in the house?

A.—Yes.

Q.—Supposing a gully-trap or a running siphon is choked with solid matter, would that admit of the introduction through it of sewer gas?

A.—No; of course not.

Q.—Do you know what the condition of the gully-traps in the Queen's Road and Girgam District is generally?

A.—Having had other duties to perform I have not recently been so much about the district, but I am informed that they are kept fairly clean and there have not been many complaints.

Q.—Taking the gully-traps of the Queen's Road and Girgam District, and comparing them with the gully-traps of the Khetwadi District, which is the best? Do not answer the question unless you have been looking into the matter personally of late.

A.—I have not been looking into the matter of late.

Q.—In Agripada the house connection work is nearly finished?

A.—Yes.

Q.—It is let out by contract?

A.—Yes.

Q.—What is the system adopted there?

A.—The same as in the Queen's Road and Girgam District.

Q.—In other words you abandoned the wall siphons in house gullies?

A.—Yes.

Q.—We come now to the work which has just been stopped—the work which was undertaken under a resolution of the Corporation some two or three months ago. In this, the remaining portion of the first drainage section, the same principle has been pursued?

A.—Yes.

Q.—Throughout the whole of the city in which this system of house connection has been completed, excluding the Fort, has the size of the gully-trap been the same? 6 inches by 6 inches on the top and below the lip 4 inches.

A.—Yes.

Q.—Now about the English Model Bye-laws. Have you anywhere throughout the system introduced the English system of a low-level vent at one end of a house drain and a high level vent at the other? I am speaking of houses which have been fully connected.

A.—No.

Q.—What is the internal diameter of a house drain?

A.—Six inches invariably.

Q.—What is the smallest internal diameter of any pipe sewer?

A.—The smallest street sewer is 9 inches.

Q.—The annular siphon shown in the model provides for the automatic flushing of the house drain?

A.—Yes.

Q. That was introduced in anticipation of the water-closet system?

A.—Yes. We have put up several of them in Kamathipura.

Q.—An experimental system of native water-closets has been introduced in Kamathipura?

A.—Yes.

Q.—How many?

A.—Two or three in all, and a double one in our own chauki.

Q.—Then the water-closet system has been experimentally tried in Kamathipura?

A.—Yes.

Q.—Has it been greatly used?

A.—Yes.

Q.—Have they been out of order?

A.—Yes, at times.

Q.—On what account?

A.—Principally on account of neglect on the part of the people using them. They put in all sorts of things.

Q.—Are they connected with the annular siphon?

A.—They are flushed with a waste-preventive cistern containing an annular siphon.

Q.—Is the flushing in the W. C. automatic?

A.—No, it depends on the person using the water-closet.

It was here pointed out by Mr. Mehta that the question of privy connections was not being inquired into by the Committee.

The Commissioner pointed out that he merely wished to have a complete record.

Q.—In Agripada a chawl belonging to the Hon'ble Mr. Fazalbhoy Visram has recently been, or is now being, connected with the sewer?

A—Yes.

Q.—What modification has been introduced?

A.—What I stipulated for was a channel all along each verandah, or in other words in front of the chawl an open drain.

Q.—On ground level?

A.—Just so far above ground level so as to exclude storm-water. At the end of each of these channels I arranged for a jump weir, that is a weir so arranged that when there was a small flow of sewage, it would fall into the gully-trap, and when a large body of storm-water came it would leap over the gully-trap into the storm-water drain. Each of these gully-traps has to be connected with the street sewer.

Q.—Without the intervention of a running siphon?

A.—Not altogether. There is one running siphon through which the sullage of all the chawls will pass.

Q.—That system amounted to dispensing with the house drain?

A—Yes.

Q.—All the down-take pipes dropped in this case into the gutter?

A.—There were no down-take pipes in this case. It is a ground-floor house. There is a pipe in the verandah discharging into the gutter or channel.

Q.—Along the front of the whole of each chawl there is an open gutter which receives all the sullage of the houses?

A.—Yes.

Q.—Had you any special reason for adopting that system?

A.—I wanted to try the effect of such an arrangement.

Q.—Had you been informed of the Health Officer's views on the preferability of the above generally?

A.—No. It was done before I was aware of his views in that respect.

The meeting adjourned to Friday, 15th instant, at 4 p. m.

BOMBAY, 15*th July* 1892.

AT the meeting of the Committee of the Corporation held this day, there were present:—

Javerilal Umiashankar Yajnik, Esq., President; Abdalla M. Dharamsi, Esq.; Ardasir D. Mody, Esq.; Brigade-Surgeon Lieut.-Colonel S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Dominick A. DeMonte, Esq.; Furdoonjee N. Bisni, Esq.; Framjee D. Divecha, Esq.; W. C. Hughes, Esq.; Kaikhosro N. Kabrajee, Esq.; Meherjibhai R. Setna, Esq.; Muncherjee C. Murzban, Esq., C.I.E., Nanabhai N. Katrak, Esq.; Pherozeshah M. Mehta, Esq.; Rahimtula M. Sayani, Esq.; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissioner; the Health Officer; the Acting Executive Engineer; and the Secretary.

The minutes of the meeting held on the 8th instant, were signed.

It was agreed that the Standing Committee be asked to recommend the Corporation to sanction the grant of Rs. 1,000 from surplus Cash Balance, on account of printing charges, and allowance payable to Mr. Gordon, short-hand writer, who has been engaged for the Committee.

The Examination of Mr. James W. Smith, M.I.C.E., Acting Executive Engineer, was proceeded with.

Mr. Bhalchandra Bhatawadekar: Are the questions and answers about Mr. Blaney's house embodied in the report of the last meeting?

The Municipal Commissioner: That was not part of my examination of Mr. Smith. There was a difference of opinion as to a point of fact.

The Municipal Secretary: The printed copies of the report of last meeting are only proof copies.

The Municipal Commissioner: I want to ask one or two more questions.

Since the last meeting of the Committee you have looked up the old plans relating to the house-connection work at Kamathipura, as well as examining the locality there?—Mr. Smith: I have.

You find, as a matter of fact, that even from the first, in that district it was not the practice to insert wall siphons where there was a gully trap?—Yes, that agrees with a note on the standard plans which were prepared for house-connections. (Plan produced.) *Note.*—"In cases '*a*' and '*b*,' (where there is an open gully trap below), the iron siphons shown on the drawing may generally be omitted." That is signed by Mr. Walton and countersigned by myself.

Mr. Mehta: Any date to it?—Mr. Smith: Not to the note. The plan was registered on the 28th June 1883, and the note was made at the same time.

The Municipal Commissioner : As a matter of fact, the general rule has been to have either the gully trap or the wall siphon, but not both ?

Do you remember on which authority that was done ?—I think the plans are sufficient authority, all the plans having been prepared in that way.

When I asked the question I was under the impression there had been a change in the Queen's Road and Girgam section. The system has been practically the same from first to last ?—Practically. As a general rule, where there is the one there is not the other, although I don't say there are not cases where there are not both. You asked me a question at the last meeting about Mr. Baldwin Latham. He was in Bombay at the time of the construction of the Queen's Road and Girgam sections, and Mr. Latham considered there was too great a complication of siphons or traps and that there should be none except at the ground level. He was then referring to the model.

Mr. Mehta : He went on rather insufficient data then ?

The Municipal Commissioner : I was going to say his opinion was a little unaccountable unless he was looking at the model. I have no further question to ask of Mr. Smith.

Mr. Blaney : I think I ought to say that I asked Mr. Smith whether a pipe drain was connected with my house. It is quite true there is one. The open surface drain ought to have drained the house much better. I am now put to the trouble of washing out this house-connection constantly to keep the nuisance down. Have all the houses built since 1882 had their house-connections put in by the owners, and have all the connections been made on the patterns approved by the Municipal Engineer ?—Mr. Smith : Will you kindly put one question at a time ?

Since 1882 have all the house-connections been put in by the owners, because you told this Committee of certain sections of the city in which you put the house-connections, leaving the Committee to suppose that about one-third of the city had house-connections provided by the owners since 1882 ?—I cannot tell you the exact date, but since Mr. Braham left and I was appointed Deputy Executive Engineer, Drainage, all new houses have been drained by the owners of such houses on the principle we have adopted.

Mr. Kabrajee : Since what date ?—I cannot tell you at the moment. I can by referring.

Mr. Blaney : On the principle approved by the Municipal Engineer ?—Yes.

Can you give us some idea of how many houses since then ?—I cannot without making a reference.

Well, about 12,000 houses ?—It may be.

About 12,000 houses sewered by private owners. This is apart from the Corporation ?—That is taking 12 years.

On a particular date the Corporation passed a resolution proposed by Dr. Blanc and seconded by Sir Henry Morland, that all new houses should provide their own house-connections ; I ask from the date of that resolution, did you insist on carrying out this resolution of the Corporation ?—I think it may be taken from that date, whatever it was.

Apart from these houses, Mr. Smith, and apart from the houses which you, as Municipal Engineer, have laid house-connections to, have many other houses provided their own house-connections and put them in on the new system ?—Well, some have. I would not go so far as to say many.

Can you tell about how many ?—I really could not.

The whole question resolves itself into this ; Mr. Smith says that the Kamathipura district is supplied with house-connections, Khetwady district is supplied, and the first portion of the drainage section, Dhobi Talao, is supplied.—(Mr. Smith : Dhobi Talao is in Queen's Road and Girgam district, and not the first Drainage Section).—Mr. Blaney continuing : you may call it that. In addition to that all the houses built since 1882 have had their house-connections made by the public and a large number of other persons have put them up ?—Yes, but I am not sure of the date.

The system of house-connections, as recommended by Dr. Guyer Hunter's Drainage Commission, is described in their report ?—Yes, I believe it is.

That was the system sanctioned by the Corporation after having been adopted in Dukarwadi ?—Yes, I think so.

Has that system been departed from ?—To begin with, I am not sure that the system adopted in Dukarwadi, and introduced by Mr. Braham, was approved by the Drainage Commission.

We can refer to it.

(The report of the Commission was here referred to.)

Mr. Blaney : There is their recommendation. Is that the system you have carried out throughout Bombay ?—I am not sufficiently acquainted with the system as carried out in Dukarwadi, to say.

But surely you know that system ?

Mr. Mehta : The one recommended by Dr. Hunter's Commission. Was that the one carried out ?

Mr. Blaney : That is the only one the Corporation has sanctioned.

Mr. Smith : I do not know : I cannot compare the one with the other. I daresay I can find plans to enable me at the next meeting to make the comparison.

Mr. Blaney : That would be fair. I will reserve that question.

Mr. Blaney : Perhaps it would be better Mr. President to hand over my questions to Mr. Smith and let him answer them at the next meeting.

The President : Such of the questions as Mr. Smith is unable to answer may be left over until the next meeting.

Mr. Mehta : If there is anything which it would be better to postpone, then let it be held over.

Mr. Blaney : I think there are many questions which Mr. Smith would like to look at. Any question you cannot answer I would ask you to postpone Mr. Smith. I have prepared these questions very carefully and after great consideration, and I do not think it is fair to ask Mr. Smith to answer them at once. The next one, I think, you will postpone for obvious reasons.

You are acquainted with the cost of the Kamathipura system? —Yes.

There is a double cost, that of the first system, and then it was decided to take the drainage out and have the house-connections made anew. The cost works out at a certain rate which I have seen in Mr. Walton's report, can you say right off whether the Khetwady system put in is cheaper than the system in Kamathipura?—I may say to begin with that there was no system of house-connection in Kamathipura before we took up the matter of drainage. That makes the question easier. As regards house-connections, there was no double expense.

They are exactly the same?—There were no house-connections in Kamathipura before we adopted the present system.

The Kamathipura system works out at a certain rate; I have seen it.—Yes.

Khetwady works out at a certain rate, can you tell whether there is any difference in the cost?—My impression would be that the system as carried out in Khetwady would be more expensive than in Kamathipura, because in the latter place there are long house gullies running from one street to another, such as right through from Bazaar Street to Centre Street, and so on.

What is the average cost of the Kamathipura and Khetwady system?—I cannot anwer that.

What is the cost of the Dhobie Talao system?—I cannot say without referring to the accounts.

Will you be able to give them at the next meeting?—Yes, if it is held a week hence.

Nearly all the houses in the native town have sweepers' gullies between them?—Yes.

Are many of these very long, and do they hold sewage?—Yes.

What provision has been made in the house-connection system for keeping them sweet and free from sewage?—Gully traps have been placed for the reception of sewage.

Still you say it collects there?—I understood you were speaking of those house gullies in which connections had not been made, because in the greater part of the native town connections have not been made.

[redacted]sion has been made in the house-connection [redacted] gullies sweet and free from sewage?—Pro[redacted]y gully traps and drains under the surface.

[redacted]ct in them on the surface?—That which is [redacted] to be found?—Sullage and dirty water.

And mosquitoes by the million?—I dare say.

Do the walls of the houses on each side of the sweeper's gullies act as ventilating shafts; does sewage gas go upwards, because the walls are near each other?—I do not think you can call a house gully a ventilating shaft; if wind blows through it, sewer gas would certainly be cleared away.

Have you gone to a window on the first story of a house and put your head out and would you expect to get any sewer gas fumes?—I should expect to smell any sullage lying in the house gully.

You say no change has been made in the house-connection system from first to last?—Yes. No essential difference.

You never came across such a change, even a modified change, or a small change in the house-connection system, on which it was necessary to consult the Health Officer about the change?—No.

Has your office any record as to the effect of house-connections on public health?—No, our office has not. I may say the Health Officer's reports are sent to our office.

Do you make any examination yourself as to the result of your work?—It is difficult to do so, because the health districts are not co-terminous with our sewer districts.

That may be, but as a Sanitary Engineer you would naturally desire to know what effect your work had upon public health?—Yes, we study the Health Officer's reports as far as they assist us in forming a judgment.

Do the public misuse the house-connections?—Yes.

Very grossly?—Yes.

Is that from ignorance?—Yes; I have always noticed that when we first put house-connections up, they are very much more troublesome, and become much more frequently choked than afterwards when the people get more accustomed to the use of them.

They do choke up?—Occasionally.

How do the people misuse the house-connections?—They force all sorts of things into the down-take pipes, waste food, leaf plates, ashes, sand and earth; and besides that, the nahani connections are used for urinating and defœcating, as is shown in the case of a petition recently placed before the Corporation.

And that causes the house-connections to be a nuisance?—In some cases.

Do you mean to say that in some cases they are misused and still do well?—Yes.

With urine and night-soil?—Yes.

Where are these cases in which extraordinary sanitary results prevail, where the more you foul the connecti[redacted] do?—I do not say that; what I said was, that[redacted] connections become more frequently choked t[redacted]

Mr. Mehta: What do you attribute tha[redacted] to say; perhaps some people use them [redacted] others in employing a larger quantity of [redacted] likely the reason.

Mr. Blaney: Are all the house-connections in your charge?—Not at present.

Whose charge then?—In the charge of Mr. James.

I meant the Executive Engineer?—Yes.

I am not speaking of individuals. What order are the house-connections in?—In very fair order generally.

Is it necessary that all traps should be free of deposit?—No, not absolutely free.

They may be choked up?—There is a difference between absolutely choked, and not absolutely free.

May they be half full?—Well, yes, probably.

It depends on the stuff?—To some extent.

They may be half full of poison; does it depend upon the stuff, then. If it was rice-washings it would kill?—That is not the sort of stuff which would hang in a gully trap. The deposits in them are heavy material, such as sand and similar matter.

Mr. Sethna: What does Dr. Blaney mean by rice-washing?—Is that dangerous?

Mr. Blaney: You had better come and have a talk with me some day.

Mr. Mehta: Are we going to have a medical discussion here?

Mr. Blaney: If a trap contains deposits, will sewer gas form there?—Mr. Smith: It depends upon what the deposit is.

Such varieties as at present form in the traps?—I have already said that sand is usually found in the traps.

If sewer gas forms in the traps, is it free to go in the direction of the house as well as the direction of the street drain?—It can escape from the surface of the trap.

Can it go towards the house?—Yes.

From your experience, do you think that people understand anything about traps, or sewer gas, I mean the masses?—No, not the masses.

Far beyond them is it not?—Yes, I think so.

Were you the Engineer who put in the Khetwady connections?—Yes.

Some of the cross lanes are all more or less filled with sewage; if the houses are completely sewered and connected, why should the side drains, which are storm-water drains, carry sewage?—Because the foul water is thrown there instead of into the *nahanis*, it being shot out of the doors and windows and from the verandahs.

I think Mr. Acworth explained that.

The Municipal Commissioner: I did.

Mr. Blaney:—It is important to have it explained, it does a lot of [redacted] Khetwady.—Mr. Smith: It does.

[redacted] the Khetwady open side drains swept along to [redacted] labourers?—Yes, by men of the Health [redacted]

[redacted] one in the morning?—I have seen it done

After the people have had the benefit of it all night, is this process of throwing sewage into open drains, a gross insult to scientific sewerage ?—Of course it is, if you provide receptacles for sewage, and people throw it elsewhere, it is an insult to the system.

Have you ever reported the matter or proposed a remedy to prevent people throwing their sullage water out of doors, that is to stop the storm-water drains being filled with sewage ?—Yes, we have had notices issued to people informing them of the evil consequences.

Have you asked the Corporation to change the system ?—No, I have no means to suggest for preventing people from throwing foul water out of their doors and windows.

Well, but you might have shut up the drains, and made the storm-water drains underground ?—Even if you have the drains underground, you must have water-tables for the storm-water to run on, and people would use the water-tables in the same manner. Water is not only thrown into the drains, but also on to the roadway, and it runs down the slope of the road.

Is the automatic flusher you presented with your model capable of washing out all deposits from a trap ?—It would not affect deposit in a gully trap, but would wash out the siphon.

The Municipal Commissioner : The water would not pass through the gully trap ?—No.

Mr. Blaney : Don't you think measures for keeping the gullies between houses—sweepers' gullies-free from sewage should form part of a house-connection system ?—Well, so it does ; all you can do is to provide people with means of disposing of the sullage, but if they throw it into the house gullies, it is not the fault of the arrangements made.

Would not that be overcome by a daily flushing, now you have got Tansa water—health is health ?—The nuisance could be overcome in that way no doubt.

Don't you think the Engineer should have suggested that. I suppose this work of putting in house-connections in Bombay is less satisfactory than it would be in an English town ?—O, yes.

Why ?—Because of the kinds of abuse they are subjected to.

Do you happen to know if the house-connection drains are more foul in the hot weather than in the cold ?—I think the probabilities are that they would be fouler in the hot weather.

Do you happen to know whether fevers are more prevalent in some houses than in others, and in some localities more than in others ?—I have ascertained that from the Health Officer's report.

Did you put in the Fort sewage system ?—Y[redacted]

Were house-connections omitted ?—I ex[redacted] meeting of this Committee that they were o[redacted] the Fort, and I explained how far they [redacted] nothing more done than what is just sufficie[redacted] into the sewers in the street.

But practically the house-connections were omitted. You don't find an estimate for it in the four lakhs?—I have not referred to the estimate.

It is not there, and Mr. Ollivant told the Corporation that house-connections were purposely omitted. I proposed an amendment that they should be put in, but it was rejected?—I don't know.

Do you think they ought to have been put in?—I think so.

And probably the health of the district is not so good by omitting them?—Yes, probably.

Was your plan of connecting the Hon'ble Fazulbhoy Visram's *chaul* by an open drain running along the front of the house an experiment or a known improvement?—It was an experiment.

Is it a better plan than the latest plan adopted for the Dhobie Talao district?—It is not finished and has had no trial.

Do you think more experiments of this kind are necessary?—Yes, of some kind.

In connection with the house-connections generally?—Well, I should be prepared to suggest certain modifications.

The idea in your mind is, I understand it, that you adopted an open drain in Mr. Fazulbhoy Visram's *chaul*, in order to overcome the faults of the natives, who misuse the system, and by giving them an open system you thought that they would better understand it?—Yes, that was the great point.

Have you ever tested the efficiency of the house-connections?—I don't quite understand that. I have examined them very frequently indeed.

You can state in that way?—I have examined them frequently in all parts of the city.

Have you ever found derangements?—Yes.

Very often?—Yes.

Through the faults of the people?—Yes.

You have often found derangements, nothing more common?—I did not say nothing more common, but I have found derangements, such as pieces of pipe thrown down, and holes knocked in siphons, and discharge pipes.

Have you seen Dr. Sukharam's observation carried out in a district where a woman finding the house-connection blocked, hammers with a crowbar until she gets it into the street?—Yes, I have seen such things; holes in siphons and discharge pipes, and pieces of down-take pipe taken away.

For what purpose?—To clear the choking.

T[redacted] four inch down-take pipes in Dobie Talao [redacted]ut in the house-connections?—Pipes of all [redacted] inches.

[redacted]es?—I cannot say that.

[redacted] have enquired say that the small pipes are [redacted]—My impression is that the majority were [redacted]nches.

I take it for granted there were four inch pipes somewhere about; certainly there were three inch pipes in that district?—Yes.

I want to know if many have been allowed to remain?—Not many, I think.

Have the ground floor pipes been of a smaller diameter, the usual 2½ inches?—There may be some cases where the pipes are larger, but usually they are 2½ inches.

Do the small down-take pipes frequently choke?—No; not straight down-take pipes.

You have not examined them perhaps?—Yes, I have very frequently. I don't say they never choke.

Well, we can go and see?—Yes.

Have you the gully drains put in at such a level as to allow privy water to flow into the houses?—I am not aware of such a case.

Would you be surprised if I showed you such houses?—Yes.

If such a thing exists it would be because the Engineer did not go down deep enough?—Yes.

For fear of the house tumbling down?—It might be on that account or it might be that there was not sufficient grade for the pipe drain, but I cannot imagine such a case.

Perhaps the sooner you know it the better; if I take you into a room and show you the privy water running into the living premises, you would say it was an extraordinary state of sewerage?—I should certainly.

That finishes my questions?—I have noted down those reserved.

Mr. Nanabhai Katrak: Why are wall siphons in the gullies in Queen's Road abandoned?—I explained that at the last meeting; the reason is, because they were so frequently choked.

What has induced the Executive to do without siphons as much as possible?—The previous answer applies.

When were the houses in Bazaar Gate Street connected with the new sewers?—Three or four years ago.

Has it come to the knowledge of the Executive that since these connections were put in foul smells have appeared, where they did not exist before?—Yes, and these smells come from the sullage discharged from the house drains into the open gully traps.

And smells have increased where they did exist before?—I think not.

Has it come to the knowledge of the Executive that house-connections with cistern heads are choked up?—If a wall siphon chokes, the cistern head chokes.

And that sullage water overflows the receptacles?—Yes, with the siphon choked.

That is a necessary consequence?—Yes, [redacted] cleaning them.

Do you know that gully traps in the Fo[redacted] sullage water overflows and contaminates [redacted] traps?—There are very few gully traps [redacted] are at the lower end of the house gullies.

Do these also get choked up?—Yes, they do, and we have a staff of men to clean them.

Is it occasional or often?—I cannot say.

The Municipal Commissioner: It depends upon the taste and fancy of the spectactor. (Laughter.)

Mr. Nanabhai Katrak: You have mentioned in your evidence that you think the state of the drainage system in the Bazaar Gate Street is not satisfactory, that the house-connection work is not satisfactory, and that the house drains are very unsatisfactory. Do you suggest any measure or measures which will place the drainage of Bazaar Gate Street in a more healthy condition?—A complete system of house-connections should be carried out not only in Bazaar Gate Street, but also in the whole of the Fort.

You described it as not satisfactory?—I have gone farther and said that it is most unsatisfactory.

Do you suggest measures that will make it satisfactory?—I have; not only as regards Bazaar Gate Street, but also the whole of the Fort.

The inmates of the houses connected with new sewers complain of an increase of foul smells when the traps are not choked?—That is due to the foulness of the down-take pipes.

What do you think of the drainage system as a whole in this city? Is it satisfactory, or all that could be wished?—I think, as a whole, it is satisfactory.

Mr. Mehta: I say we have nothing to do with the whole drainage system.

The President: Only the house-connections.

Khan Bahadur M. C. Murzban: You said on the last occasion, Mr. Smith, that under the old system you used to put up wall traps to the upper floors, and you omit them under the new system?—I think the answer I gave to the Commissioner cleared that matter up.

I understood you to say that in one particular part of the city a wall trap was attached to each *nahani*, whereas under the new system now carried out the trap is omitted?—Yes; where there is a gully trap.

Which of the two systems do you prefer?—If it were not for the expense and the choking of the wall siphon, I would certainly prefer to have a wall siphon to every *nahani*.

That is to say, on the score of economy you would not have them?—On the score of economy and the want of freedom from choking.

Are you aware, Mr. Smith, that eminent sanatarians insist upon every down-take pipe being protected by means of traps, and that there is always a certain amount of foulness in a down-take pipe?—I am not sure that I quite understand the first part of the question. I thought you meant that every down-take pipe should be cut off from a drain; that is well understood.

My question is, should every down-take pipe be protected by means of a trap so as to prevent foul gases entering the residence?—It is not universally insisted upon. Mr. Baldwin Latham was averse to a wall siphon at every *nahani*.

Was he averse to it if there was no complication?—I had no conversation with him on that point. I can only read what he says as others can read it.

You have expressed an opinion that foul gases are received in the houses from down-take pipes; then you must have a trap?—Yes, that is a remedy.

You insist upon two and a half inch down-take pipes, whether the house-connection is made by the Municipality or private individuals?—Yes.

I suppose you are aware that under the English by-laws a soil pipe must not be less than 4″ in diameter?—Yes; that refers to a soil pipe.

What is the difference in the functions which a night-soil pipe performs, from that of a house-connection in Bombay that has to pass the ashes and dirt you have described?—I don't think the ashes and the dirt would make much difference. I confess, however, that I did not know until recently that *nahanis* were used for urinating and defœcating purposes. As a matter of fact the down-take pipes perform the same work as night-soil pipes in England, but they are not so frequently used or so exclusively used for this particular purpose.

Don't you think, Mr. Smith, that if the capacity of the down-take pipes was increased there would be less chance of choking?—I don't think it would make a great deal of difference. I have often observed in the native town pipes as large as four inches in diameter choked.

You insist upon 2½″ pipes being laid in private connections and do not allow larger pipes?—We do occasionally if the people press the point.

My experience is the other way, your inspectors insist upon it?—We have had cases where people have asked to be allowed to put up larger pipes, and we have allowed them to do so.

When gully traps are on the road-side, they are buried 6″ or 8″ below the ground level?—That is one method.

How are they cleaned?—They have to be opened up, but I have not known a case of a buried gully trap being choked.

I have. I can only give you my own experience.

There is a possibility?—Yes.

In that case you have to open the roads?—Yes; unless pouring water down the down-take pipe clears it. In most cases it would.

The usual size of ventilating pipes adopted in the case of house-connections is 2½″?—Yes.

Is not a larger pipe necessary?—I think it would be unnecessary.

Perhaps you are not quite aware that the present Sanitary Engineers in England require that the ventilating pipes should be the same in diameter as the drain pipe ?—That is going on the system of a ventilation by current. That was held to be good for sewers also until recently. We have now the opinion of Mr. Latham that it is not a thing to be encouraged in street sewers.

But in the case of houses ?—I fail to see that what is good in the one case can be bad in the other.

Are manholes constructed at each end of a house drain, one at each end ?—Not universally.

In the case of a house drain being choked, how is it cleaned ?—We have what we call inspection chambers at every departure from a straight line, and drains are cleaned by opening these inspection chambers. Of course it is sometimes necessary to take a pipe up.

I am speaking of a house drain being choked from one end to the other ?—At the head of the pipe we have a junction, the end is closed, and the top is easily opened. We pour water down the branch of the junction and that in many cases is sufficient to clear the pipe.

Do you mean that funnel-shaped arrangement on the top ?—No, that would be a cistern head. I am speaking of a stoneware junction.

Then it is done by water pressure. If you had a chamber at each end, don't you think it would facilitate cleaning the pipe ?—Of course, the more numerous the inspection chambers the better.

I am speaking of cleaning chambers ?—It is the same thing.

I make a distinction between them. If you have a chamber in the middle of the pipe to see which part is choked, I would call that an inspection chamber, but if a pipe 100 feet long had a chamber at each end, through which you could pass a rod, would not that be better ?—I think an inspection chamber just as good.

You have not that in your system of house-connections ?—Not universally.

Would you recommend it ?—It would increase the expense.

We are now interested in having a perfect system of house-connections, and not dealing with cost ?—I would certainly advocate what you suggest, an increase in the number of inspection chambers.

Mr. Blaney : It is life and death, not money.

Mr. Murzban : You told us, Mr. Smith, that the appearance of a large quantity of water in an open storm-water channel is attributable to the people throwing it out of their doors and windows ?—Yes.

Am I to understand that people go out of their way not to use the connections ?—Yes.

In such large quantities as to leave streams in open channels ?—Exactly.

Is there any chance or possibility of this being caused from a leakage in the pipes?—O, no.

Are the house drains laid on made foundations, and not on soft soil?—In bad ground rubble stone is put down, rammed, and additional layers also rammed down on the top if necessary.

Is there any chance of the pipe being bent?—Not by sinkage of the foundation I have described.

Are the drain pipes carefully examined as to their gradients after laid, and is there no possible chance of water accumulating in the pipes?—They are carefully examined.

Do the street sewers get as much liquid matter as they are calculated to carry?—No.

On account of the people throwing a great portion of the liquid matter outside, and allowing it to pass into the drains through the storm-water channels?—Yes.

If the sewers received the full quantity of water they are calculated to receive, they would be self-flushing to a certain extent?—Yes.

And the accumulation of silt, of which we hear so much, would be obviated?—Yes.

We have heard, Mr. Smith, the system of open channels advocated instead of drain pipes. In the event of the system being adopted, would people, in your opinion, still misuse drain pipes by throwing ashes, dirt, and dust into them?—Undoubtedly.

That would pass into the end trap and choke it?—Yes.

Even with an open drain?—Yes.

I suppose you have observed the state of open gullies before the introduction of the new system?—Yes.

Very foul indeed, were they not?—Most offensive.

Even with open channels there is a risk of them being fouled, and requiring some arrangements for flushing, and a staff of men to clean them every morning?—Yes.

At this point the Committee adjourned its sitting until Friday, the 22nd June 1892.

BOMBAY, 29*th July* 1892.

AT the meeting of the Sub-Committee of the Corporation held this day, there were present :—

Javerilal Umiashankar Yajnik, Esq., President ; Abdalla M. Dharamsi, Esq. ; Ardasir D. Mody, Esq. ; Brigade-Surgeon Lieut.-Col. S. O'B. Banks ; Bhalchandra K. Bhatawadekar, Esq. ; Thomas Blaney, Esq. ; Cowasji Pestonji, Esq. ; Fardunji N. Bisni, Esq. ; Framji D. Divecha, Esq. ; W. C. Hughes, Esq. ; Meherjibhai R. Setna, Esq. ; Muncherjee C. Murzban, Esq., C.I.E. ; Nanabhai N. Katrak, Esq. ; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissionor ; the Acting Executive Engineer ; the Health Officer ; and the Secretary.

Mr. Muncherjee C. Murzban pointed out that the following question on page 19 of the printed Proceedings was not put by himself, but by some other gentleman : "Do you mean that funnel-shaped arrangement on the top ?"

Again, on page 20, the words used in the second question were : "Are the house drains laid on concrete foundations" not "made" foundations.

The minutes of the meeting held on the 15th instant were signed.

Read the following :—

22nd July 1892.

DEAR SIR,—I wish to draw your attention to the fact that no report of the proceedings of the House-connection Committee was supplied to us last week, although reports, obviously written by the same pen, were supplied to the *Times of India* and the *Bombay Gazette*. I do not know if this was owing to the *Advocate* not being represented at last Friday's meeting. However, I would thank you to let me know if our representative will be allowed to attend the next meeting of the Committee, or, if not, if you will order the Secretary to supply us with a report similar to those supplied to the morning dailies.—Yours faithfully,

PAT. LOVETT,
Editor, *Advocate of India*.

JAVERILAL U. YAJNIK, Esq.,
President, Municipal Corporation.

The President : I asked the Secretary to bring the letter before the Committee. We never authorized any one to supply reports to the papers, and it is quite unusual to have reports of Committee meetings. As a rule, no paragraphs should appear in the public papers of the proceedings of this Committee.

Mr. Nanabhoy N. Katrak : We can only record this letter.

The Secretary : I ascertained from Mr. Gordon, the official reporter, that he supplied the report to the *Bombay Gazette* and *Times of India*.

The Commissioner : Before doing so, Mr. Gordon asked my permission, and I said there was no objection to giving the gist of the proceedings.

Mr. Meherjibhai R. Setna : What objection is there to having reporters present at these meetings?

The Municipal Secretary : None of these meetings have ever been reported.

Mr. Balchandra K. Bhatawadekar : I do not think it advisable that anything should appear in the press before the labour of the Committee is completed. I think the paragraph published did not give a correct report of the meeting, and such paragraphs are likely to create a misapprehension in the minds of the public.

Mr. Meherjibhai R. Setna : The public will be most anxious to learn what is going on in this Committee, and I for one can see nothing wrong in allowing our deliberations to be reported.

The President : It is not usual.

Mr. Meherjibhai R. Setna : Cannot the whole report be given just as the Corporation meetings are given? The papers would give columns on this subject, because the public is concerned to a great extent, and the question has raised much discussion. Any thing of a private nature we might ask the reporters not to notice.

Mr. Ardasir D. Mody : I think the public should wait until the official report is published.

The President : Short-hand notes are taken and circulated amongst the members of this Committee, and when our work is completed, the whole thing will appear in the shape of a report.

Mr. Meherjibhai Setna : People will not read the whole thing if it is published all at one time.

Mr. Blaney : There is one argument in favour of Dr. Setna's contention, and that is, a considerable period of time must elapse before the full report can be published, and during that time the public will be in ignorance of what is going on. If the meetings are reported week by week, persons who can throw light on the subject, and persons whose interests are now damnified by what is going on, will know that they have an opportunity of putting in an appearance here and standing up for their rights.

The President : I am entirely in the hands of the meeting on this subject.

Brigade-Surgeon Lieut.-Col. Banks : I would ask whether these meetings are private or not. If they are public, then there is no objection to their being reported ; but if they are private, as I assume they are, reporters would be out of place.

The President : I think the best course will be to ascertain the sense of the meeting whether gentlemen of the Press should be admitted.

The matter was then put to the vote, and it was decided to admit reporters by 6 votes against 4.

The following letter to the President, dated 6 Dhaswady, 19th tant, was read :—

DEAR SIR,—I wish to offer some evidence on the grievances of house-connections, before the Committee closes its sittings, by rd of mouth : if you don't like to extend your sittings, I shall ward my remarks in writing to you—though this would be ublesome.—Yours very truly,

R. W. DESAI.

Mr. Nanabhoy Katrak : The gentleman should be asked to d in his questions. I think that is the best way.

The President : That will be the most desirable course.

The following letters, dated 18th instant, were read :—

BOMBAY, *July* 18*th*, 1892.

VERILAL U. YAJNIK, Esq.,

President, Sanitation Committee.

DEAR SIR,—I shall be obliged by your arranging for me to give dence before the Committee. My opinion is that the house-con-tions as carried out are unsuitable for the large majority of the abitants of Bombay.

They require skilled attention from the tenants of the houses to ich they are fixed, and for various reasons, ignorance, fear of emonial pollution and similar reasons, this attention they are likely to get.

I would confine the house-connections, as now being carried out, selected localities, and in no case would I allow them to be fixed houses occupied by native tenants, such as chawls.

I am prepared to indicate to the Committee a simpler form of se-connection suited to native ideas.—Yours truly,

D. GOSTLING.

BOMBAY, *July* 18*th*, 1892.

W. BARROW, Esq.,

Secretary to the Corporation.

DEAR SIR,—I shall be obliged by your arranging for me to e evidence before the Sanitation Committee now sitting, upon subject of the house-connections.

I believe that, from my experience, I am able to suggest modifi-ons in the present system, which will make it more healthy and re suitable to the circumstances in which we are placed in nbay.—Yours truly,

D. GOSTLING.

Mr. Blaney : Mr. Gostling does not offer to give any written ement ; he asks to be examined.

Mr. Bhalchandra K. Bhatawadekar : I think his opinion would most valuable.

The following letter was read from Mr. Framjee Aderjee :—

BOMBAY, 20*th July* 1892.

To THE CHAIRMAN AND THE COMMITTEE OF THE
House-Connecting Drains.

SIRS,—I shall feel obliged if you will show me the project of Dr. Weir's model of house-connecting drains and explain the same.—I am, &c.,

FRAMJEE ADERJEE.

Care of ARDESHER K. PATEL,
Civil and Mechanical Engineer,
Abdoola Dhurmsee's Office.

Mr. Muncherjee C. Murzban : Don't you think the better plan would be to allow the applications to stand over until your work is over, and then the Committee can select such gentlemen as they may wish to examine ? At present I don't think we can give any replies to these letters.

The President : But in the case of Mr. Gostling ?

Mr. Muncherjee C. Murzban : I think they ought all to be treated alike; if we were to reply to Mr. Gostling and not the others, it would cause dissatisfaction. The best plan seems to be to allow them to stand over until our work is over, and then the Committee can make its selection as they think proper. I propose that the applications be allowed to stand over for the present.

The President: They are only three in number.

Mr. Muncherjee C. Murzban: If it is once known that we are prepared to receive such evidence we will get fifty applications, and probably many of them from people who know nothing about the matter.

Mr. Blaney : In the *Thames Pollution Enquiry* the Royal Commission sat for months and examined every one who could throw light upon the matter. You say, Mr. Murzban, that most of the people to be examined before us know nothing about the matter ; I think that most unfair.

Mr. Muncherjee C. Murzban: What I said was that we may get applications from persons who know nothing about the matter.

Mr. Blaney : I am afraid you are prejudiced, Mr. Murzban. (Laughter.)

The President : I think that Mr. Gostling's letter cannot be treated the same as other applications ; he is a professional man.

Mr. Blaney : I take it that this Committee should be an encouraging one, and not a rebuffing one. Let us get evidence from where we can, and our Committee will show its sense by listening to all evidence placed before it.

The Municipal Secretary : If it is decided that we should reply to Mr. Desai, what about Mr. Framjee Aderjee ?

Mr. Ardasir Mody : He can come and see the model.

The Commissioner: Yes, but don't tell him it is put in by the Health Officer, because it is put in by the Commissioner.

The President: I believe Mr. Framjee imagines he has been robbed of some of his ideas?

The Commissioner: Oh, that is it; well, I shall be happy to show him the models.

The Municipal Secretary: Then I will inform him to apply to the Municipal Commissioner direct.

It was also decided that Mr. Gostling be informed that the Committee will be glad to hear his evidence on a future day.

The following written replies to questions asked by Mr. Blaney on a previous occasion were put in by Mr. James W. Smith, Acting Executive Engineer:—

"*Q.*—What is the cost of house-connections in—

(*a*) Kamathipura?

(*b*) Khetwadi?

(*c*) Dhobie Tallao (Queen's Road and Girgam) District?

A
92722.

"*A.*—Particulars of house-connection works in Kamathipura, Khetwadi, and the Queen's Road and Girgam District.

Description of Works.	Cost of house-connections.	No. of houses connected.	Average cost of connecting each house.	Population.	Average cost per head of population.
	Rs. a. p.		Rs. a. p.		Rs. a. p.
Kamathipura	58,231 6 0	1,429	40 11 11	28,158	2 1 1
Khetwadi...	73,428 8 0	737	99 10 1	14,386	5 1 8
Queen's Road and Girgam District	6,19,690 7 0	2,284	271 5 1	99,488	6 3 8

"The resolution proposed by Dr. Blanc, and seconded by Captain Morland, on the subject of house-connections, was carried in the Corporation on 3rd November 1882.

"It will be seen from a perusal of the debate which took place on the occasion, that the resolution referred only to the 1st section of the new main drainage works, including Kamathipura District, and, indeed, at that time there was no other portion of the city in which new sewers were completed and ready to receive house sullage.

"I had nothing to do with the drainage of new buildings either in respect of passing plans or supervising work until Mr. Braham left on the 1st March 1886, when I was appointed Deputy Executive Engineer, Drainage, and I cannot speak definitely regarding new buildings before that date, though I know that, in the meantime, there were communications on the subject between the Executive

Engineer on special duty and the Building Department. I have found that the number of new houses erected is, somewhere, about 1,000 per annum, and there would, therefore, be 6,000 houses fitted with house-connections on the new system between 1886 and the present time, but a considerable proportion of these would either be connected with street drains of the old system or (as in outlying districts) with cesspools.

"It will be seen that an assumption that 12,000 houses have been sewered by private owners is not warranted by the circumstances.

"The system of house-connections recently carried out is practically the same as that instituted in Dukarwadi in 1876.

"It will be seen from a reference to plan No. 35 of 1876 (plan put in marked "A") that a 6" stoneware pipe was carried up every house gully and that the sullage received into that pipe drain passed through a siphon into the street sewer. Before entering the siphon it passed through a C.I. hopper the top of which was level with the paving of the house gully, and that arrangement though suitable in Dukarwadi, where there was only one drain both for sullage and storm-water, could not be adopted when it was determined to separate sullage from storm-water.

"The hopper and connected siphon was a near approach to the gully traps which we now use, but more cumbrous.

"The down-take pipes did not discharge into gully traps but into open bends, and so there was nothing to prevent the stench from the pipe drain passing up the down-take pipes and entering the rooms, nor was there the least impediment to ashes, earth, sand and other matters passing freely into the pipe drain.

"The down-pipes too as they terminated 4 or 5 inches above the bends did not discharge all the sullage into them but some splashed over on to the paving of the house gully.

"The departure from open bends and the adoption of gully traps was due in great measure to Mr. J. H. Grant who was then Municipal Commissioner.

"When he was in England in 1880 he had interviews with Sir Robert Rawlinson who introduced him to Mr. E. F. Griffith and the latter prepared several plans for house drainage connection work.

"Those plans for the most part illustrate the fittings of European water closets, sinks and baths, and are not adapted to the general wants of this country.

"In these plans, however, stoneware gully traps were shown at the foot of the down-take pipes and Mr. Grant ordered some to be sent out.

"He said the interviews he had had with Engineers at home had convinced him that it would be an eminently unsanitary arrangement for the down-take pipes to discharge into bends directly connected with the drains without the intervention of a trap. Stoneware gully traps such as those now used were introduced accordingly.

"When carrying out the work in the Queen's Road and Girgam District, which comprises Dukarwadi, it was found that the connections in the latter place were in so bad a condition that they could not be allowed to remain.

"Numerous *nahanis* were discharging on to the surface of the house gullies as they do under the old system in the native town, bends were broken, the diaphragms in the C. I. hoppers had all disappeared and the pipe drains in the house gullies were so badly choked with silt that it was impossible to clean them without breaking most of the pipes, and it was only in two house gullies that the old pipe drain could be retained."

Mr. Blaney : Is that all ? Is that the same system as carried out in Dukarwadi which Sir G. Hunter's Committee and Government recommended to be carried out ? There was a resolution of the Government at the end of Sir G. Hunter's report recommending the Corporation to carry out that system ? *A.*—Yes. The expression is that it was generally suitable for present purposes.

Mr. Blaney : Oh yes, beautiful, beautiful.

Examination of Mr. Smith by Mr. Ardasir D. Mody.

Q.—Are the privies connected with the house drains for their sullage water in the part of the City where the house-connections are made ? *A.*—Yes ; it is received in a gully trap and in the case of a house gully passes into the 6" pipe drain therein and thence into the sewer.

Q.—In the native town baskets are used to receive the night-soil in the privies and when water falls into the basket some of the night-soil passes into the drain in a liquid state ? *A.*—Yes.

Q.—You have said that in cases where there are gully traps, wall siphons are omitted ? *A.*—Yes.

Q.—So, through the down-take pipes, privies are connected with the rooms which have *nahanis* ? *A.*—No down-take pipes have been put up for privies. It is only what runs over the basket in the chamber at the ground level that passes into the drain.

Q.—The first siphon leads to the gully trap ? *A.*—It is a part of the gully trap.

Q.—And so through the pipes ? *A.*—No, we have put up no down-take pipes for privies upstairs. The usual arrangement is a masonry shaft and the night-soil from the upper privies passes down through the shaft to the basket below. That system now goes on as it always did. Whatever overflows the basket in the chamber goes into the gully trap.

Q.—Before the siphon begins ? *A.*—The siphon is at the lower end of the house gully.

Q.—So smells can get into rooms which have *nahanis* ? *A.*—There is no alteration in the privy system, it is what it has always been.

Q.—But the *nahanis* ? *A.*—I have been talking of privies.

Q.—But through the pipes there is a connection with the *nahanis* and the privies? *A.*—No, there is no connection between the *nahanis* and the privies.

At this point Mr. Smith explained the model of the house-connections to Mr. Ardasir Mody.

Mr. Smith: There is always a trap between the down pipe and the drain, and no direct connection therewith.

Mr. Ardasir Mody: Cannot the smells from the privies enter the rooms through the *nahanis*? *A.*—No.

Q.—Supposing a sewer in a street were choked for some time would sewer gas enter the houses through the shafts? *A.*—I have never known an instance in which a pipe sewer in a street has been entirely choked for any considerable time. If it were completely choked, there would be no passage for sewer gas.

Q.—I talk of a case in which for two or three days the sewer is choked up? *A.*—We have never had such a case. I think it is very unlikely. Mr. Baldwin Latham says he has no fear of any gas which might pass through water.

Q.—Will you please answer the question put to you by the Commissioner at the first meeting; *viz.*: Take the gully traps in the Queen's Road and Girgam district and compare with the Khetwadi district, which are the best?

The Commissioner: The question should have been "which are in the best order"?

Mr. Smith: I think they are in about equally fair order.

Mr. Ardasir Mody: Which would you prefer? *A.*—They are identically the same and in equally good order in both districts.

The Commissioner: I am afraid the question has somewhat misled you, Dr. Mody; gully traps are the same in both districts. My object was to see whether Mr. Smith could point to any distinction between a newly connected and a more anciently connected district, and as to the order in which gully traps were kept in the two.

Mr. Smith: I may say that the connections in the Queen's Road and Girgam Districts keep in much better order than when they were first put in.

Mr. Ardasir Mody: If, as you say, people throw sullage into the storm-water drains, is it not to prevent the choking of the pipes of the *nahanis* as the sullage contains ashes and sand?

A.—I have never heard that suggested.

Q.—Is it not probable, because why should they throw the water into the storm-water drains when it could be put into the *nahanis*?

A.—I have always thought they were following their ancient custom.

Mr. Blaney: They had no two sets of sewers in their ancient customs.

Mr. Smith: I refer to the ancient custom of throwing sullage out of the doors and windows.

Mr. Blaney: But is it not to prevent choking? *A.*—That reason has not been given to me by any house occupier.

Mr. Blaney : Is it not probable ? *A.*—I really don't know.

The Commissioner : Could sullage water choke a house-connection ? *A.*—No.

Mr. Ardasir Mody : You have said that there are foul smells in a house where the traps are not choked ? *A.*—It is due to the foulness of the down pipes.

Q.—Please explain. *A.*—I investigated those cases mentioned by Dr. Bhalchandra, and in each case I satisfied myself that the smells complained of came from the down-take pipes, which had been used for the passage of night-soil and urine.

Q.—Why should it remain there ? *A.*—It will always soil the pipes.

Q.—A little water will clean them ? *A.*—I have already said there is not sufficient water used.

Q.—It is a general practice to put down water when there are foul smells, don't you think the smells arise from the partly choked sewers ? *A.*—Certainly not.

Q.—I cannot understand the fouling of the down-take pipes when they are vertical ? *A.*—I should like you to see one taken down so that you might satisfy yourself.

Q.—When the pipes in a house are choked up, have the inhabitants to write to the Engineering Department ? *A.*—There are no pipes inside houses, they are all outside.

The Commissioner : Dr. Mody means house-connections.

Mr. Smith : Strictly, it is their own duty to employ a plumber to clean them.

The Commissioner : What is actually done ? *A.*—They write to us.

Mr. Ardasir Mody : What do you expect them to do, write to a plumber ? *A.*—Strictly speaking, that is what they ought to do. They write to us and we clean them.

Q.—What time elapses before they are cleaned ? *A.*—Not more than a day or so.

Q.—But they have to write to the Engineering Department and get an answer ? *A.*—I mean after the complaint reaches us.

Q.—And during the time the people have to suffer from the smell ? *A.*—Yes.

Q.—Have you had to get more pipe cleaners ? *A.*—Yes.

Q.—Is the present staff sufficient ? *A.*—They are doing the work fairly well, but I would rather have a larger staff.

Q.—So the inhabitants have to depend on these trained men for the cleaning of the pipes ? *A.*—Do you mean the drain pipes underground ?

Q.—I mean the down-take pipes ? *A.*—It does not require much skill to clean them.

Q.—There are special men employed ? *A.*—Yes.

Q.—Don't you think that in the open channel system the inhabitants themselves can clean them without the assistance of regular men ? *A.*—Yes, they could take a broom and sweep them.

The Commissioner: One question with regard to Dr. Mody's interrogations; you said whenever any house-connection was choked, it was necessary for the house occupier to write to the Engineering Department before he got the matter rectified? *A.*—Yes, I said that.

Q.—Don't the halalcore men of the Drainage Department, when they go round in the morning, immediately take measures to clear any case of choking that is reported to them? *A.*—Yes. I was thinking of cases which might have escaped the notice of the cleaning staff.

Mr. Blaney: How do they do it?

The Commissioner: By putting their hands into them. (To Mr. Smith.) Can he always do it with his hands or a plunger?

Mr. Smith: Yes, in the great majority of cases.

Mr. Blaney: If there is a bandicoot there, what does he do?

The Commissioner: He pulls it out of course.

Examination of Mr. Smith by Mr. Bhalchandra K. Bhatawadekar.

Q.—How long have you been in India, especially in Bombay, and how long have you been connected with the Bombay Municipality? *A.*—I came to India in the beginning of 1877 and have been connected with the Municipality since August 1878.

Q.—I believe you are thoroughly acquainted with the habits and customs of the people of Bombay. *A.*—Yes, fairly well.

Q.—When you were entrusted with the work of carrying out house-connections, did you believe that the house-connections, though scientifically and theoritically workable, were suitable to the habits of the people? *A.*—I thought so.

Q.—Don't you believe that the down-take pipes which are invariably 2½ inches in diameter are much too small for the sullage water and the different substances that are forced through them; might not they have been larger with advantage? *A.*—That question was asked me the other day and I answered that for sullage they are ample, and that if people persisted in putting all sorts of rubbish through their *nahanis* into the down-take pipe I did not think there would be any considerable improvement even though four-inch pipes were used. I also mentioned that I had many times seen even 4″ pipes choked.

Q.—Don't you think that they might be larger with advantage? *A.*—Well I think there might be some advantage in increasing the size. I have in a recent design suggested that they should be 3″.

Q.—Don't you believe that the gully traps and the different siphons are smaller than they might have been? *A.*—No, I think not. I would not propose any alteration with regard to the size of them.

Q.—Are you aware of the fact that Mr. Walton framed the total estimates for the house-connections in the first drainage section so low that they were four lakhs below the lowest tenders of the contractors? *A.*—I don't know how much below, but it is a fact that we could get no tender at the rates put down.

Q.—That is the lowest tender was much higher than the estimates? *A.*—How much I am not prepared to say.

Q.—Never mind. Was this done to show economy to the Corporation and at the expense of convenience to public health? *A.*—No, I think not. I may say that in Khetwadi we carried out the work departmentally at the rates put down in the estimates.

Q.—So it was done with a view to economy?

Mr. Viegas: What have we to do at present with the question of cost and economy, and whether the tenders were so many lakhs higher or lower? I think we should confine our examination entirely to the subject-matter.

Mr. Bhalchandra K. Bhatawadekar: I have directed my question to show that the smallness of the pipes is due to a desire for economy and that has interfered with the practical working of the house-connections. (To Mr. Smith.) Do you believe that the small size of the pipes is due to this false economy?

Mr. Viegas: I would like to know whether Mr. Smith confirms the fact that the smaller dimensions were used with a view to economy. It is a most important question.

The President: I think Mr. Smith has answered that question.

Mr. Smith: Of course we had to consider economy in all our estimates, but it was calculated that $2\frac{1}{2}''$ pipes would be sufficient, and it would therefore have been extravagant to estimate for larger pipes.

The Commissioner: You don't mean to say that a pipe of an inadequate size was used for the sake of economy? *A.*—No, at that time I did not think a larger pipe was necessary.

Mr. Bhalchandra K. Bhatawadekar: You don't think it was due to false economy? *A.*—No.

Q.—Have you in any of the drainage sections noticed large pipes above and small ones below. *A.*—Yes, in some few places, especially in the Fort.

Q.—Have you visited Ramwadi and Withalwadi? *A.*—In Withalwadi the work has only just been commenced.

Q.—And Ramwadi? *A.*—That is not a Municipal name for a place, but I have always understood that what the natives call Ramwadi was what we call Withalwadi. I know Withalwadi which is in the first drainage section. The work has only recently been commenced, and is now stopped.

Q.—Do you find the small and large pipes there? *A.*—I have not seen them.

Q.—Is it proper from an engineering and scientific point of view? *A.*—Well, no. I would rather have taken down the larger pipes and put smaller ones throughout.

Q.—You think the current of water from the larger pipes would necessarily choke the lower ones? *A.*—Oh, no, there is never sufficient water going down even a $4''$ pipe to entirely fill a $2\frac{1}{2}''$ pipe.

Q.—There would be no overflow, and if it was borne witness to by gentlemen, you would say it was false? *A.*—It might be due to choking.

Q.—But there is an overflow? *A.*—If the pipe were choked, not otherwise. You never by any chance see a down-take pipe running full bore.

Q.—From a scientific point of view it is not proper? *A.*—No.

Q.—Was this done with a view to economy? *A.*—Yes.

Q.—Are there any departmental orders on the subject? *A.*—I know of none.

Q.—Did Sir William Hunter's Committee recommend the present dimensions of the down-take pipes and the siphons, or did it recommend any dimensions at all? *A.*—So far as I know, the Committee gave no instructions.

Mr. Blaney: They gave the Dukarwadi model.

Mr. Bhalchandra Bhatawadekar: Are house-owners, who have built houses subsequent to the putting up of house-connections by the Municipality, restricted to the same size, or are they allowed to use large size pipes? *A.*—That question I have already answered, and I said that, as a rule, they were restricted to that size, but that some little latitude is allowed, and in some places larger pipes have been admitted.

Q.—Do you believe in the efficiency of the siphons? *A.*—Yes, I do.

Q.—Do they satisfactorily serve the purpose they are intended for? *A.*—Yes.

Q.—Do they allow any sewer gases to escape through *morees* into houses? *A.*—No.

Q. Do you believe in the utility of the ventilating shafts? *A.*—I do.

Q.—Do they prevent the escape of sewer gases into the houses? *A.*—They give a vent for it in another direction.

Q.—Do they prevent the escape? *A.*—Yes, into houses.

Q.—Do they cause any nuisance to, or are they a source of danger to the houses in their vicinity? *A.*—Well, in some cases there has been a difficulty—where high houses come next to low houses. There has been a difficulty in such cases.

Q.—They are a source of danger? *A.*—Where a high house comes next to a low one, we have generally endeavoured to put the pipe on the taller house.

Q.—Have you received complaints? *A.*—Yes, and we have removed pipes from low houses to tall ones, and the nuisance has ceased.

Q.—What is the percentage of the choking of the down-take pipes on the walls of houses? *A.*—I don't know; we should have to take time into consideration.

Q.—Say in one or two years? *A.*—That is a question I cannot answer.

Q.—What is the percentage of the overflowing of these pipes on the walls of houses? *A.*—I don't know.

Q.—Can you give an idea; are there a large number? *A.*—Certainly not.

Q.—A small number? *A.*—Yes, a small number. There is an overflow when a pipe gets choked until our men come round to clean it.

Q.—You said, in reply to the Commissioner, that the house-connections were in fair order; is that experience gained by a personal inspection of them? *A.*—Yes.

Q.—Do you think that the accumulation of sullage and sewage in the side gutters on the Thakurdwar and Kandewadi Roads is due to the same cause you mentioned to Dr. Blaney and Mr. Murzban as regards the Khetwadi gullies? *A.*—Only part of the place has been drained on the new system.

Q.—But where it has been carried out? *A.*—Yes, it is due to the same cause.

Q.—Do you believe that open gullies through which sullage water flows are more noxious and injurious to the health of the people than a concentrated dose of sewer gas finding its way from the down-take pipes through *morees* into houses? *A.*—Yes, I think so, that is, than an occasional smell from a down-take pipe. It is not usually the case. In isolated cases there is a stench from down-take pipes.

The Commissioner: Dr. Bhalchandra said a concentrated dose of sewer gas, that is a very different thing I take it to an occasional stench from a down-take pipe. A constant and concentrated dose would, I presume, be fatal.

Mr. Bhalchandra K. Bhatawadekar: What has been the result of your inspection of, and inquiries about, the house-connections of the three houses I wrote to you about in reply to your note? *A.*—I have answered that question before.

Q.—Did you find any of the down-take pipes choked? *A.*—No.

Q.—But still there were bad smells; what were they due to? *A.*—To the state of the down-take pipes.

Q.—What is the condition that gives rise to this? *A.*—I did not take the pipes down, because I thought it would be preferred that I should not make alterations. I should like the pipes to be taken down so that the Committee may examine them.

Q.—Can you trace the different stages of the development of this system from its early adoption to the present stage? *A.*—It was first adopted in Kamathipura and then in Khetwadi.

Q.—I mean the different stages of the development? *A.*—I do not quite understand the question.

Q.—The alterations? *A.*—I have already said in evidence that it is practically the same from the first up to the present time.

The Commissioner: Do you mean in Bombay, Dr. Bhalchandra?

Mr. Bhalchandra K. Bhatawadekar: Yes.

The Commissioner: You don't mean the Darwinian development in scientific sewerage?

Mr. Bhalchandra K. Bhatawadekar: No; nothing ontside of Bombay. (To Mr. Smith.) Were any inspection chambers provided for in the original plans and estimates? *A.*—No.

Q.—When were they introduced? *A.*—During the progress of the work in Khetwadi.

Q.—Has there been any departure in essential details or principles? *A.*—No.

Q.—Do you think any modifications in the present system desirable? *A.*—I think so.

Q.—And an improvement on the present system? *A.*—Yes; I have already prepared two modified designs.

[The plans were then put in. They bore the endorsement "Plan 3044." *Note.*—This design comprises the following departures from the present system:—(*a*) No gratings in *nahanis*; (*b*) larger pipes (3 inch instead of 2½ inch); (*c*) larger cistern heads with wire covers; (*d*) down-pipes in gully traps farther away vertically from the position of *nahanis*; (*e*) open traps with catch-pits and gratings at foot of down-pipes. "Plan 3050." *Note.*—The design comprises the following departures from the present system:—(*a*) siphon traps in each *nahani*; (*b*) larger pipes (3 inch instead of 2½ inch); (*c*) no cistern heads.

Mr. Blaney: That is the latest design? *A.*—Yes.

Mr. Blaney: I think that statement Mr. Smith has made now and the plan submitted is of such importance that I should like Mr. Smith to give it to the reporter so that he may take down what the latest proposal is for our guidance.

Mr. Smith: All the reporter need take down is this note on the plans.

Mr. Bhalchandra K. Bhatawadekar: The report should be accompanied by a sketch.

Mr. Blaney: The reporter cannot make a plan.

The President: Can Mr. Smith give us copies?

Mr. Smith: Yes, I can let you have copies.

Mr. Bhalchandra K. Bhatawadekar to Mr. Smith: What is your opinion about this model. (Red model.)

Mr. Nanabhoy Katrak: It is not yet put in.

Mr. Smith: It is virtually a return to the old system of house gullies in the native town.

Mr. Bhalchandra K. Bhatawadekar: What objection is there to it? *A.*—First of all, all the sullage runs on the surface.

Q.—Any other? *A*—There is nothing to keep off the stench of the sullage from the pipes which ascend into the rooms and *nahanis*.

Q.—Will the stench ascend into the *nahanis*? *A.*—Yes.

Q.—Are there more facilities in this way than with the present arrangement? *A.*—Yes; because there is no trap of any kind.

Q.—There is the open current of air, which is a better trap. Nature makes a trap there? *A.*—Well, as a member of this Committee said, the stench of the old house gullies is perceptible through the windows.

Q.—If properly cleaned and flushed? *A.*—If properly cleaned and flushed, there would be no smell. If there were a large gang of men, so large that they would always be kept perfectly clean, there would be no reason to object to them.

Q.—So large as to prevent any house occupier choking them? *A.*—Yes; or, if choked, to immediately clean them.

Q.—In reply to Mr. Murzban, you said that the end trap in this model could be cleaned by the hand? *A.*—The gully trap; yes, it can be easily cleaned. A staff would be required for cleaning the gully traps in the red model.

Mr. Ardasir D. Mody: To what does this refer?

The Commissioner: That model (the red one) was handed in by Mr. James who is now in charge of the Drainage Department. It is an experimental illustration of what would be the outcome of Dr. Weir's idea for draining chawls.

Mr. Blaney: Then, we can leave that until the examination of Mr. James.

Examination of Mr. Smith by Brigade-Surgeon-Lieut.-Col. Banks.

Q.—What establishment have you for cleaning the traps? *A.*—A consideraable number of men.

Q.—What proportion of men to traps is required for (*a*) cleaning and (*b*) for supervision of the men cleaning them? *A.*—I cannot answer that now.

Q.—I saw recently, outside the Morgue, Kamathipura, a pipe completely obstructed by sand and earth. It had been taken up and was lying on the road; what was the cause of the obstruction of this pipe? *A.*—That was not a sewer pipe, but a pipe crossing the road to convey the storm-water from one side to the other under a cross-road.

Q.—Was it large enough for the purpose intended? *A.*—I think so.

Q.—What is the difference between the most recent house-connections in Kalkadevy and Kamathipura? *A.*—As I have said several times there is no essential difference. There has been none since they were first commenced in Kamathipura, and the latest work.

Q.—By whom are the house-connections in Frere Road and the Eastern Boulvard made? *A.*—In Frere Road by house owners, and on the west side of the Boulvard, some of the house-connections were done as part of the Fort Drainage.

Q.—What is the cause of the frequent obstructions in the house-connections in the Frere Road and the Eastern Boulvard? *A.*—I am not aware that there have been frequent obstructions.

Mr. Nanabhoy Katrak: There are obstructions now?

Mr. Blaney: Any number.

Brigade-Surgeon-Lieut-Col. Banks: How can you prevent the leaves getting into the traps? *A.*—Only by gratings. The objection to gratings is, that whilst they prevent the leaves getting into the gully traps, they stop the grating and the sullage overflows on to the surface.

Q.—Do you consider the "Shone system" adopted in Rangoon suitable to buildings in Bombay? *A.*—It has nothing to do with house-connections. It is for the general sewage of a city. There is no special method of house-connections in that system. It does not deal with the sullage until it has passed out of the houses into the street sewers.

Examination of Mr. Smith by the President.

Speaking with reference to Bhuleshwar, the diameter of the upper wall pipes put up by house-owners varies from 4 to 5 inches? *A.*—Well, I don't know about 5, the sizes are from 3 to 4. I don't think I have seen any larger than 4." I am speaking of the internal measurement; some people might measure the outside.

Q.—In making house-connections, do you allow some pipes to remain as they are and remove only the down-take pipes? Do you remove the lower pipes? *A.*— I have not done so in my own practice, except, in some instances, in the Fort where house-connections have not been fully carried out.

The Commissioner: Mr. James can answer these questions.

The President: How much liquid will a 4" wall pipe placed vertically discharge in a minute? *A.*—I will work that out for you by the next meeting.

Q.—You told the Commissioner the other day that a 2½" pipe placed vertically would discharge 350 gallons per minute, what effect will the large column of liquid and *cutchra* have on the down-take pipes? *A.*—I have stated that you never find a down-take pipe discharging full bore.

Mr. Blaney: Of liquid, you mean; you get a full discharge of solids. (Laughter.)

Mr. Smith: I have said that a 2½" pipe would be ample to take all the sullage that as a rule goes down a larger pipe.

The President: Do you consider this arrangement suitable? *A.*—I have said that but for the sake of economy, I would have preferred to put the smaller pipe all the way up.

Q.—Are the lower ends of these wall pipes closely connected with the upper ends of the down-take pipes, or is any space left between them? *A.*—Between the gully trap and the foot of the down-take pipe, and between the large and the smaller pipes there is no close connection.

Q.—Then they discharge liquid outside of them? *A.*—A 2½" pipe is amply large to take the water from any number of *morees* in a house that could conveniently be connected with it.

Q.—We have seen that a discharge does take place outside? *A.*—That is when the lower part is choked. It would only occur in such a case.

Q.—Some of the wall pipes are of masonry construction? *A.*—Tiles and chunam.

Q.—How are they connected? *A.*—I have always taken them down.

Q.—You find them still in Bhuleshwar? *A.*—I have always taken them down.

The Commissioner: Mr. James will answer that question; he has carried out the work recently. I have seen one, and just at that point a lady was discharging her sullage out of the window and narrowly missed me. (Laughter.)

A member: That is valuable evidence.

The President: Are you aware that since the formation of the house-connections some halalcores are in the habit of emptying their soil baskets into the gully traps? Mr. Smith: Yes.

Q.—What is done in such cases? *A.*—I can only report the matter to the Health Officer.

The Commissioner: Only let us catch them at it!

Examination of Mr. Smith by Mr. Cowasji Pestonji.

Q.—Is it true that the sewers are to a certain extent full of silt? *A.*—Oh dear, no.

Q.—Is there some silt? *A.*—Yes.

Q.—That is owing to inefficient flushing? *A.*—Yes.

Q.—If all the water was to pass into the sewers, I believe there would be a sufficient quantity of water?

Mr. Blaney: I ask are we going to consider the question of sewerage? Both yesterday and to-day I have had the extraordinary experience of the sewer being bailed out. It was resolved that we should confine ourselves to the house-connections, much as might be said about the sewers.

The President: That is so.

Mr. Cowasji Pestonji: The efficiency of the sewers has to do with the storm-water drains.

Mr. Blaney: That, again, is a question concerning the drainage.

Mr. Cowasji Pestonji: But they are part of the house-connections.

Mr. Blaney: So is the pumping station and the sea. (Laughter.)

Mr. Cowasji Pestonji: I will repeat the question, and you will see how it affects the matter before us. The inefficient flushing, I believe, is owing to the waste or mal-use of the sullage water, it regurgitating in the storm-water drains and on the roads from the gully traps and wall siphons and sometimes from the cistern heads instead of passing direct to the sewers.

The President: I think that is admissible.

Mr. Smith: Only when the gully trap or cistern head is choked, and where there is an insufficiency of attention in cleaning these things.

Mr. Cowasji Pestonji: That is all owing to the choking of the gully traps and wall siphons. How are the gully traps fouled? *A.*—With the foul matter put into them.

Q.—You said in your examination that they are partly fouled by persons throwing refuse matter into gullies. Is it so? *A.*—Things thrown into the gully would not pass into the gully traps, but lie on the surface.

Q.—You said that people throw stuff from the window? *A.*—Yes, sometimes into the cistern head.

Q.—How is it that the gully traps which are near the wells and bathing places, some by the road side, get choked up? *A.*—By those materials I have mentioned being thrown from the windows into the cistern heads.

Q.—That will take a good deal of trouble? *A.*—I have seen it done over and over again.

Q.—But sometimes they cannot reach? *A.*—In these cases the material would not be put into the cistern heads.

Q.—To prevent gully traps from choking you have them provided with gratings? *A.*—Not always, there are very few gratings. I have found that where gratings are provided, pieces of leaf and rag get over them and stop them, with the result that the sullage overflows into the house gullies.

Q.—If you don't provide them with gratings, don't you think the traps will be more choked by more solid matter getting in? *A.*—But with gratings you keep out the sullage also.

Q.—But would it not be better to have them all provided with gratings?

Mr. Blaney: Since the gratings have been abolished, do you know the rats have increased by thousands? You should see the fun. Mr. Smith works by day, I work by night. Oh, oh, it is getting a great business, plenty of fun for the rats.

Mr. Smith: I think they are better without gratings.

Mr. Blaney: So say the rats. (Laughter.)

Mr. Cowasji Pestonji: The gratings are sometimes stolen? *A.*—Yes.

Q.—Have you taken any steps to improve the grating as the gully traps get so often and so easily choked up? *A.*—I think gully traps are better without gratings.

Q.—How are the gully traps cleaned? *A.*—By halalcores.

Q.—How? *A.*—Partly by plungers, partly by the hand, and also by water.

Q.—The halalcores clean the gully traps? *A.*—Yes.

The Commissioner: The Drainage Department halalcores.

Mr. Cowasji Pestonji: Are they all Mahars or halalcores? *A.*—I cannot tell you their caste.

Mr. Blaney: On that depends the correctness of your answer.

Mr. Cowasji Pestonji: You say the halalcores put water into the traps; they are not allowed to touch water? *A.*—I have employed some women whose special duty it was to pour water into gully traps.

Q.—Have you an efficient staff of men to clean them? *A.*—I answered that just now, and I said the staff was doing fairly well, but I would rather have it increased.

Q.—Do you mean to say the halalcores know their business well? *A.*—Yes.

Q.—Do they simply put the plunger in a gully trap and then walk away? *A.*—They know better than that. That would be a neglect of duty.

The Commissioner: They are not examined unless they are choked up.

Mr. Cowasji Pestonji: That is unfair. The silt collects and the stink emanates even if there be a small quantity of silt. Have you any person to supervise their work? Mr. Smith: Yes.

Q.—In spite of all this, there is still choking of the gully traps ? *A.*—Yes ; otherwise there would be no necessity for the staff.

Q.—So, then, there is some fault in the traps ? *A.*—No, I don't think so.

Q.—You don't think there is any fault ? *A.*—No.

Q.—Perhaps the siphons of these traps are not of a sufficient calibre to hold grit that passes into them ? *A.*—I think the gully traps amply large.

Q.—Cannot the mischief be minimised by making them of larger calibre ? *A.*—No, I think not.

Q.—The mischief would be the same? *A.*—I would not advise any enlargement of the gully traps at all.

Q.—What is your opinion of the open gullies as recommended in that model (red) ? *A.*—I spoke on a former occasion as to that arrangement for chawls. In such cases open channels outside might be more advantageous than laying a 6" pipe drain.

Q.—The red model represents that arrangement ?

Mr. Blaney : That is part of the new scheme.

Mr. Smith: It is not shown on my new plans. I should have to make a totally different one to show that arrangement.

Mr. Cowasji Pestonji : Don't you think that the habits of the people in throwing refuse matter on the roads and into the gullies is prejudicial to their being kept sweet and clear; will not the dirt running through them to the gully traps choke up the traps sooner ? *A.*—It would be extremely important to keep the trap at the end of the house gully always clean.

The Commissioner : If the gully traps be choked, will the silt in the siphon act as a seal, that is, will it prevent the sewer gas from entering the houses ? *A.*—Yes, but the siphons would not be affected by the state of the gully traps.

Q.—Would it prevent the gas entering the house ? *A.*—Yes.

Mr. Cowasji Pestonji : Would not the gas generated by the silt in the trap pass into the house ? *A.*—It has every opportunity of failing to do so, because there are numerous disconnections. We have also to consider what kind of silt is choking the gully traps. When it comes to a final choking, what we usually find is sand.

Q.—Not always, I think ; there is a good deal of organic matter.

Mr. Blaney: A good big bandicoot for instance !

Mr. Smith : Most of it passes away and what remains is sand.

Mr. Cowasji Pestonji : But there is a good deal of organic matter, and it gives off an offensive smell ? *A.*—Yes.

Q.—Does it not give off the same stink as sewer gas ? *A.*— I don't quite understand.

Q.—The silt in a gully trap gives off the same gas as sewer gas ? *A.*—If it is decaying organic matter it gives off the same gas whether in a gully trap or a sewer.

Q.—From the *nahanis*, all sorts of organic matter goes into the the gully trap ? *A.*—Yes.

Q.—Is it not a fact that when the gully traps are full of water only, there is no stench or scarcely any perceptible in the *morees* if the water seal be perfect? *A.*—Not in those particular cases which have recently been brought to my notice.

Q.—There will not be any smell? *A.*—Yes, there would be a smell from the down-take pipe when used for urine and night-soil.

Q.—I would like to know where the smell comes from? *A.*—From the fouling of the down-take pipe from urine and night-soil.

Q.—It collects on the sides? *A.*—Yes, I should like the Committee to have some pipes taken down, particularly at the houses referred to by Dr. Bhalchandra, in order that we may see the inside of the pipes.

Q.—What is the diameter of the down-take pipes? *A.*—2½″.

Q.—Do you think it sufficient? *A.*—I stated just now; I was prepared to recommend an enlargement to 3″ and in the new design I have shown 3″ pipes.

Mr. Bhalchandra K. Bhatawadekar: Would it not be wise to avoid these repetitions?

Mr. Cowasji Pestonji: We cannot always hear down at this end of the table. You mean, Mr. Smith, that 3″ pipes are sufficient? *A.*—I have said so.

Q.—I can quote authorities in which they say 4″? *A.*—That is for night-soil pipes.

Q.—Yes, but wall pipes are down-take pipes. Supposing you were to provide between the down-take pipe and the gully trap another siphon, would it not minimise the nuisance that has been created; that is the filling up of traps? *A.*—It would minimise the smell which now comes from the down-take pipes in those cases specially brought to my notice by Dr. Bhalchandra, but if you refer to a petition now before the Corporation, you will see it particularly mentions this wall siphon and prays it may be discontinued.

At this stage Mr. Cowasji Pestonji postponed his further examination of Mr. Smith.

The following letter was read from Mr. K. N. Kabraji:—

RAST GOFTAR OFFICE,
BOMBAY, 29*th July* 1892.

JAVERILAL UMIASHANKAR YAJNIK, ESQ.

DEAR SIR,—I regret my inability again to attend the meeting of the Committee convened for this day.

Friday is the most inconvenient day to me of all days in the week, and if the Committee have resolved to meet only once a week, and that also on Fridays, I am afraid I shall have to resign my membership of the Committee for my utter inability to serve on it on Fridays.

Before doing so, however, I would request you and the Committee to be so good as to consider if some other day could not be fixed for the meetings, and also whether it would not be desirable to meet on more days than one each week.

Friday being the closing day for the English Mail, I am inclined to think that it would be inconvenient to some other members besides myself to attend on this day. If so, the Committee, I submit, will have good reason to change the day.

If, however, Friday be a convenient day to all or most of the members, I do not mean to suggest that the day should be changed singly for my sake.

With apologies for putting you and the Committee to the trouble of considering this question,—I remain, &c.,

KAIKHOSRO N. KABRAJI.

Mr. Viegas: The question has been discussed and already settled.

The President: It was my duty to lay the letter before the meeting.

The Commissioner: Is not this Committee to report in two months?

Mr. Blaney: They mean two long months.

The Commissioner: At this rate we shall be two years, if every witness is examined at length.

Mr. Blaney: I don't think in a serious business like this a month or two is anything.

The Commissioner: I agree with you.

Mr. Blaney: The witnesses have to be examined and it is desirable we should examine them as rapidly as possible.

The President: Is it not desirable now the Corporation is not sitting to meet twice a week?

It was decided to meet at 3 p.m. on Monday next, the 1st August, and Friday, the 5th idem.

BOMBAY, 1*st August* 1892.

At the meeting of the Committee held this day, there were present :—

Javerilal U. Yajnik, Esq., *President ;* Ardasir D. Mody, Esq. ; Brigade-Surgeon-Lieut.-Col. S. O.'B. Banks ; Bhalchandra K. Bhatawadekar, Esq. ; Thomas Blaney, Esq. ; Cowasji Pestonji, Esq. ; Fardunji N. Bisni, Esq. ; Kaikhosro N. Kabraji, Esq. ; Meherjibhai R. Setna, Esq. ; Muncherji C. Murzban, Esq., C.I.E. ; Nanabhoy N. Katrak, Esq. ; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissioner ; the Acting Executive Engineer ; the Acting Dy. Executive Engineer (Drainage) ; the Health Officer ; and The Secretary.

The signing of the minutes of the last meeting was postponed.

Examination of Mr. James W. Smith by Mr. Cowasji Pestonji continued.

Q.—If the ends of the *moree* pipes be provided with hanging flaps immediately above the gully, will it not further minimise the nuisance ? *A.*—No, I think not, because the nuisance which has recently been specially brought to my notice arises from the condition of the down-take pipes themselves.

Q.—The dirt goes down into the gully traps and there collects ? *A.*—No, as a rule it passes away.

Q.—If you provided *morees* with such a flap, less dirt would go into the pipes ? *A.*—I understood you to mean that the flap should be at the bottom end of the down-pipe.

Q.—No, at the top ? *A.*—If a good serviceable flap could be devised for the purpose it would of course have that effect, but I am doubtful about the working of such a flap, because I think it would readily get out of order.

Q.—But if it be an efficient flap it would allow water only to pass out, and not gas in ? *A.*—Yes, if such a valve can be designed to work efficiently.

Mr. Blaney : Will water go down and gas not arise ? Mr. Smith : Yes ; assuming the flap to be gas-tight.

Mr. Cowasji Pestonji : When I speak of a valve I mean that it shall be gas-tight.

Brigade-Surgeon-Lieut.-Col. Banks : I do not understand what Dr. Cowasji means.

The President : Will you explain the question ?

Mr. Cowasji Pestonji : There is a piece of pipe that runs from the *morees*. That would have to be put in a slanting instead of a straight position, and over the end of the *moree* a valve would be put. The water would force the flap open, and the gas would be prevented coming in.

Mr. Blaney : When the water is coming out then what about the gas ?

Mr. Cowasji Pestonji : Gas and water cannot occupy the same space at the same time.

Mr. Bhalchandra K. Bhatawadekar: Gas can bubble through water.

Mr. Cowasji Pestonji: So it can through the gully traps.

Mr. Blaney: Of course it does.

Mr. Bhalchandra K. Bhatawadekar: The remedy may be worse than the evil.

Mr. Cowasji Pestonji (examining red model): What is this small piece of pipe placed in the cistern head intended for? Mr. Smith: That is the discharge pipe from the *moree*.

Q.—But the top portion? *A.*—That is to give foul air an opportunity of escaping.

Q.—Generally what I see are not of this form, sometimes this piece of pipe branches out from the side? *A.*—That must be from another *moree*.

Q.—If the *moree* is not supplied with this (indicating top piece of pipe) it is supplied with a piece from the side? *A.*—I do not understand exactly what Mr. Cowasji means.

Mr. Blaney: It will be more a matter for outside examination.

Mr. Cowasji Pestonji: Have you any means of inspecting or cleaning running siphons? Mr. Smith: We have an inspection inlet in the centre of the siphon which is brought up to the surface.

Q.—The running siphons? *A.*—Yes.

Q.—When they are choked up water is prevented from running into the sewers and the silt collects there and becomes a fruitful source for the generation of sewer gases. *A.*—It depends on what the silt is composed of; usually it is sand.

Q.—You have automatic flushing cisterns to prevent such choking? *A.*—Yes.

Q.—Do they work efficiently? *A.*—Yes.

Q.—So you have no difficulty about the running siphons? *A.*—Not as a rule.

Q.—After drains and house-connections are laid it is necessary to see that the work is properly done? *A.*—Yes.

Q.—Do you go yourself, or make yourself satisfied that the work is properly done? *A.*—It is impossible for me to do so personally in every case.

Q.—Do you make yourself satisfied if your men tell you it is properly done? *A.*—We have efficient Inspectors for every part of the work and it is their duty to see that the work is done properly.

Q.—They report it is properly done? *A.*—Yes.

Brigade-Surgeon-Lieut.-Col. Banks: I should like to have an explanation of the difference between the running siphon and the ordinary siphon.

Mr. Smith pointed out the running siphon in the model.

Mr. Cowasji Pestonji: Do you think that the gully traps in connection with the closets give less trouble than those connected with the *morees*; that is, are they less frequently choked up?

Mr. Smith: I think they give more trouble, because there is not so much water poured into them.

Q.—I thought because there was less dirt, they would give less trouble?

Mr. Blaney: People have not sand and grit in their bowels. (Laughter.)

Mr. Cowasji Pestonji: A row of say twenty houses are connected with one drain? Mr. Smith: If you mean a drain running in a long house gully at the back of several houses, yes.

Q.—Would it not be better to put up an automatic flushing arrangement at one end of each drain so that there might be a constant flow? *A.*—Are you speaking of house drains, or street pipe sewers?

Q.—Street pipe sewers? *A.*—In many parts we have large flushing chambers for that purpose.

Q.—If a few of these faults in the house-connections be remedied, do you think they will work well? *A.*—I think they will.

Examination of Mr. Smith by Mr. Fardunji N. Bisni.

Q.—The length of the discharge pipes, or *nahani* pipes, is 18 inches? *A.*—Scarcely as long as that.

Q.—I mean the length from the *nahani*? *A.*—It runs only through the thickness of the wall.

Q.—Are they not generally less than the thickness of the wall, and the sullage leaks into the walls? *A.*—No, I have heard of no such complaints.

Q.—Some of the walls are 2 or 3 feet in thickness? *A.*—That is a very rare thing.

Q.—At the ground floor generally? *A.*—Not generally.

Q.—You have said there is an establishment of coolies to clean the choked up down-take pipes and wall siphons; is it a permanent establishment? *A.*—A permanent one.

Q.—In your examination by Mr. Javerilal you have admitted that the *bhangies* throw night-soil into the house drains? *A.*—I have known that to occur.

Q.—Have you taken steps to prevent it, or spoken to the Health Officer? *A.*—Yes.

Q.—You have said that a down-take pipe larger than 2½ inches is not necessary? *A.*—I have said that in the new design I have prepared I have shown 3″ pipes.

Q.—At present they are all 2½″? *A.*—Yes.

Q.—You have said you consider larger pipes unnecessary? *A.*—Yes, but in compliance with what seems to be a general wish, I have shown 3″ pipes.

Q.—Have you got a record to show the accumulation of silt in the drains at different times of the year?

Mr. Blaney: We are not on that subject.

The President: Our chief object is to look at the house-connections.

Mr. Fardunji Bisni: But that is where sewer gas emanates. Mr. Smith, you have said that the rough use of a crow-bar breaks the siphons and the down-take pipes? *A.*—Yes.

Q.—Would you not like the iron thicker? *A.*—There would be no objection to that.

Q.—At the last meeting you promised to give a short sketch of the system of sewerage, as sanctioned by the Corporation, with the modification either you or Mr. Walton have made and the reasons for such modifications? *A.*—I did so at the last meeting.

The Secretary: The statement is printed in the Minutes.

Re-examination of Mr. Smith by Mr. Meherjibhai Setna.

Q.—Do you think that by making certain modifications in the system of house-connections, as adopted, it could be made to serve the habits and practices of the natives? *A.*—I think so. I have just answered that question.

Q.—Can you give an example of the present system in Bombay which has proved satisfactory? *A.*—Do you mean that I should point out different houses?

Q.—Yes, there are public buildings of Government where it works satisfactorily? *A.*—Undoubtedly it does.

Q.—Mr. Murzban says that the house-connections made by him are satisfactory? *A.*—Yes.

Q.—Have you examined the drainage of the High Court? *A.*—Yes.

Q.—Is it used by a large number of people and does it work satisfactorily? *A.*—I can only imagine it is used by a large number of people, but it certainly works satisfactorily.

Q.—I am informed that in the Cama Hospital, where there are a large number of servants besides the patients, the new system of house-connections is working satisfactorily? *A.*—I cannot speak of my own knowledge.

Q.—If they are working well in this place where the fittings are used with care, the new system should prove satisfactory? *A.*—Yes.

Q.—Are you in favour of the open system generally, or in exceptional cases such as chawls? *A.*—Only in exceptional cases.

Q.—I notice in an answer you made previously that you consider $2\frac{1}{2}$″ down-take pipes sufficient; will you tell us if you have any objection to using a 4″ pipe? *A.*—A $2\frac{1}{2}$″ pipe, I am sure, is quite sufficient if it is properly used.

Q.—But supposing it is not? *A.*—The objection to using a larger pipe is that there is a larger interval surface to be fouled and it is undesirable on that account to have a larger pipe than necessary.

Q.—But the difficulty of chokage is overcome? *A.*—Not altogether, for I have frequently seen, as I have already said in my evidence, even 4″ pipes choked.

Q.—Do you think by introducing small flushing tanks that it would be an efficient means of keeping the pipe drains clean? *A.*—It would be an advantageous adjunct to the house-connection system; and it is adopted in numerous instances already.

Q.—Successfully? *A.*—Yes.

Q.—Are all house-connections inspected by yourself or by your assistant; the general opinion is they only look to the outlines of the work and not the details? *A.*—When I was in charge of the Drainage Department, I always looked minutely into house-connections myself.

Q.—Does your assistant go now and inspect for himself? *A.*—Yes.

Mr. Blaney: Mr. Smith has nothing to do with the drainage now; Mr. James is the Drainage Engineer.

The Commissioner: Quite right, Dr. Blaney.

Mr. Meherjibhai Setna continuing—

Q.—What class of men have you in the Drainage Department; are they men who have received training in engineering? *A.*—Yes; they have all been engaged for the greater part of their lives in engineering work of various kinds.

Mr. Blaney: The question is What education have they had for drainage?

Mr. Meherjibhai Setna continuing—

Q.—Are they specially trained for the Drainage Department? *A.*—As I said just now, they have had experience in engineering work generally.

Q.—Are they specially instructed for drainage work? *A.*—When they come to us they are instructed.

Q.—When they join the Municipality they learn? *A.*—Not only then in every case; I have one Inspector who has had special experience in drainage work at home and at Gibraltar.

Q.—How many are men who have passed out of the recognised Colleges of Engineering. Are there any such men employed as Inspectors? *A.*—I think not.

Q.—Are the pipes, which are erected to ventilate the house drains, made so that no drain gas can enter the lower houses? *A.*—That was a question put to me the other day, and I said that where a small house came against a high house we have had a difficulty in some instances, and the remedy has been to transfer the pipe from the lower house to the higher one.

Q.—I know of a case where the offence has not ceased? *A.*—I have not had it brought to my notice.

Q.—Do you think that by making proper by-laws and regulations the existing practice of people blocking up the gully traps by ashes, &c., could be stopped? *A.*—Not altogether.

Brigade-Surgeon-Lieut.-Col. Banks: Is it possible for a man to clean a gully trap with his hands? *A.*—Yes, generally he can. I will bring a gully trap on the next occasion to show you.

Q.—What is about the average cost of the house-connections? *A.*—At the last meeting I put in a statement showing the cost in Kamathipura, in Khetwadi, and in the Queen's Road and Girgam District.

Mr. Bhalchandra K. Bhatawadekar: Do you allow each member of the Committee to examine a witness two or three times?

The President: Yes, if it is necessary.

Brigade-Surgeon-Lieut.-Col. Banks: Do you think the endeavours that have been made to prevent the improper use of the house-connections have been effective? *A.*—To some extent, but not entirely.

Examination of Mr. Smith by Mr. Kaikhosro N. Kabraji.

Q.—You told us that the side drains are filled with sullage water because it is thrown there by the people? *A.*—My attention in that respect was called particularly to Khetwadi.

Q.—You will have seen that the quantity is so enormous that it actually chokes up the drain? *A.*—The drains are obstructed, but not choked. They are swept down by the Health Department at least once a day.

Q.—There is an enormous quantity of sullage-water; am I to understand it is all thrown there by the people who do not use the *morees*? *A.*—Yes.

Q.—What is the reason for not using the *nahanis*? *A.*—I said at the last meeting, that I supposed the people were merely following the ancient custom of throwing the sullage out of the windows and doors.

Q.—The people know the *nahanis* are for water, and they were built long before the house-connections were made. They were in the habit of using them? *A.*—I don't think they were more in the habit of using them then than now. They use them on certain occasions. Before the new house-connections were first made, they were in the habit of throwing a large quantity of sullage out of the doors and windows.

Q.—Have you noticed it personally? *A.*—Yes, and the Commissioner mentioned a case in which he was recently nearly deluged.

Q.—How many cases in all your experience have you noticed? *A.*—I should be afraid to say how many times I have been deluged with filth.

The Commissioner: Every time you go round? *A.*—I have on many occasions had all sorts of filth thrown over me from doors and windows.

The Commissioner: I never went up a house gully without getting it.

Mr. Kaikhosro N. Kabraji: In what parts of the city? Mr. Smith: In all parts.

Q.—In Thakurdwar or Girgam Road? *A.*—I don't remember a case there.

Q.—Well, the drains there are all filled with sullage-water? *A.*—In Thakurdwar the whole of the district is not supplied with house-connections.

Q.—In the road from Queen's Road to Girgam Road the house-connections are made, yet the drains are filled with sullage water, and the people are making free use of the *nahanis*, and are enlightened enough to know the use of house-connections? *A.*—You

must bear in mind that sullage water finds its way into that part of Thakurdwar Road from other places. As for instance, from a large district extending along Girgam Road in both directions.

Q.—And all that water is thrown in the drains by people? *A.*—Yes.

Q.—People who are supposed to know the use of the house-connections? *A.*—Yes.

The Commissioner: The last time I was in Thakurdwar I found a large number of the gully traps choked.

Mr. Kaikhosro N. Kabraji continuing—

Q.—What system have you for the detection of disordered house-connections? Mr. Smith: I have already reserved my answer to a similar question put to me by Brigade-Surgeon-Lieut.-Col. Banks in order to get the exact number of the staff engaged for the purpose.

Q.—But what I want to know is what system you have for detection? *A.*—In each district there is an Inspector, a Sub-Inspector, a mukkadum and halalcores, who are going round the connected districts every day.

Q.—Would you not be surprised to know that a broken house-connection is left in that condition for 4 or 5 five days? *A.*—That ought not to occur.

Q.—Can you tell me the time it takes between the detection of a deranged house-connection and its being repaired; is it about a week? *A.*—Yes, that might be, but if it were a minor defect the Municipal men would do the work at once.

Q.—Until that time the derangement in the house-connection continues? *A.*—There is no help for it.

The Commissioner: The man ought to send to a plumber and get it put right.

Mr. Kaikhosro N. Kabraji: Was your attention drawn to some most offensive smells at Morena's shop about last Christmas? Mr. Smith: Yes, I think I remember a complaint.

Q.—To what did you attribute it? *A.*—If I remember correctly, it came from his own drain, or that at the side of the house used largely by persons urinating.

Q.—Was it a house drain? *A.*—Yes.

Q.—Are there house-connections made in that locality? *A.*—Not complete house-connections. The work does not extend beyond the lower end of the house gullies. The work in the Fort is only a partial system of house-connections, just sufficient to take the sullage water into the new street sewers.

Q.—Does the drain in question run under the house? *A.*—No, at the side of the house, I believe; but I don't remember this particular case so minutely as to be able to give you now all the particulars about it.

Q.—I asked about it simply because it was a particular case; the stench was unbearable, and the customers had to run away? *A.*—I will look at the papers and see what occurred.

Q.—This habit of the people of abusing the house-connections by throwing solid matter into them was a known fact to the Engineering Department before the house-connections were made? *A.*—Before the connections were made, people threw the matter into the house gully.

Q.—The habits of the people were known to the Engineering Department, and the house-connections made are not sufficient to meet those habits. They are not constructed in a manner to be of use to the people? *A.*—The habits of the people tend to choke the connections.

Q.—Then they are not suited to the habits of the people? *A.*—Not altogether.

Q.—Then, either the people must give up their habits or the house-connections must be altered? *A.*—Yes.

Q.—Which course would you suggest? *A.*—I would endeavour to educate the people to the use of them, they are susceptible of education; for I have always found that when house-connections are first made, they get more frequently choked than when the people are more accustomed to use them.

Q.—The house-connections in Khetwadi have been made some two years, and the people are said to be not sufficiently educated to use them? *A.*—The chokes in Khetwadi are fewer than when the work was first done.

Q.—It must take some time for the people to learn the usage of them? *A.*—I find that a comparatively short time after the house-connections have been put up, the chokes consequent upon the misuse of them are fewer than when they are first made.

Q.—I suppose the Engineering Department has taken special care as to instructing people how to use the house-connections, such as vernacular notices? *A.*—Yes.

Q.—Do you think the notices have a good effect? *A.*—Yes.

Q.—Have you got a form of the notice? *A.*—Not here; I can produce notices at the next meeting.

Q.—Besides those localities where people are not sufficiently used to the connections, there are other localities where a better class of people are accustomed to use them, and in those localities have you not received complaints of foul smells and fevers prevailing? *A.*—The complaints I have received generally about house-connections are as regards the occasional choking of them.

Q.—Are they choked up in the better class of houses where the gullies are sufficiently clean and there is no outward sign of nuisance, but still the people complain of offensive smells and sickness? *A.*—Well, there were those houses I have spoken of before, brought to my notice by Dr. Bhalchandra.

Q.—Those were houses inhabited by a better class of people, yet they complained of bad smells and sickness? *A.*—Yes.

Q.—Can you account for it? *A.*—The foulness of the down-take pipes. That I have already given in evidence.

Brigade-Surgeon-Lieut.-Col. Banks: Do you mind me Mr. Chairman asking Mr. Smith another question.

The President: You have already examined Mr. Smith on two occasions, but if your question is of special importance it may be allowed.

Brigade-Surgeon-Lieut.-Col. Banks: You must hear it first.

Mr. Viegas: I don't think such frequent questioning should be allowed.

The President: If every member does it we shall never get to an end, but if it is only one question, it may be allowed.

Brigade-Surgeon-Lieut.-Col. Banks: Who is responsible for the maintenance of the house-connections? Mr. Smith: The Deputy Executive Engineer, Drainage.

Q.—Who repairs them? *A.*—According to the Municipal Act householders are bound to maintain them.

Q.—The house-connections made by the Municipality?

Mr. Blaney: According to the Resolution of the Corporation we are to maintain them.

Brigade-Surgeon-Lieut.-Col. Banks: What is the gradient of the house-connections in Kamathipura? Mr. Smith: Do you mean house-connections or pipe sewers?

Q.—I mean the gradient of the pipes, they seem to me to be low? *A.*—The 9" pipes are laid at 1 in 200, the 6" at 1 in 50 to 1 in 80 or thereabouts.

Mr. Bhalchandra K. Bhatawadekar: I have one more question, Mr. Smith. On the last occasion you told us of the condition of the houses I wrote to you about? *A.*—Yes.

Q.—At those houses, as well as others, where house-connections have been completed, there has been a general complaint that smells issue from the *nahanis* and are more troublesome than if they had no house-connections at all? *A.*—There has not been a general complaint to that effect made to me.

Q.—All the three houses mentioned to you are occupied by respectable gentlemen, whose evidence will be valuable and they all complain most bitterly of the smells from the *morees*, and they say that they would rather be without the house-connections than with them? *A.*—I may tell you that Mr. Nanu told me that before the house-connections were made, his house gully stank so abominably that he was obliged, when he gave a dinner party, to make his servants throw pails of water down the gully. That abated the smell for a short time, but it soon returned and he was obliged to burn incense all the time his friends remained there. He has no smell from the house gully now.

Q.—With regard to the house of Mr. Bapuji Narayan in Dukarwadi, that gentleman also complained bitterly of the intolerable smells, and that his child had been suffering from fever for the last few months on that account. He says there were no smells in the *nahanis* before the house-connections were made? *A.*—That gentleman said he was not quite sure whether the smell came from his own *moree* or from a window on the opposite side of the house gully which appeared to be the window of a cook-room.

Q.—I was told that the *nahanis* were abominally stinking, yet there was no choking. How do you account for it? *A.*—The foulness of the down-take pipes.

Q.—It is a positive nuisance? *A.*—Certainly.

Examination of Mr. Smith by Mr. Nanabhai N. Katrak.

Q.—Speaking of the siphons, we have had much talk on this subject, I ask your opinion positively whether you consider the siphon is a real water seal? *A.*— I do.

Q.—Now we have done away with it as much as possible, do you believe that gases pass more easily into the rooms? *A.*—Not sewer gas, but the stench from the down-take pipes.

Q.—That is, they pass more easily now we have done away with the siphons than if they had remained? *A.*—Yes.

Q.—So by doing away with wall siphons smells pass more readily into the houses? *A.*—Yes, from the down-take pipes.

Q.—Don't you believe the siphon themselves are a source of nuisance? *A.*—No.

Q.—Is it not possible that the water which always remains becomes saturated with sewer gas and emits smells? I wanted to reserve the question for the Health Officer, but I thought I might ask you? *A.*—I don't think the stench would pass through a water seal if it had other and easier means of exit.

Q.—Yes, but the water may become saturated with the gas and then emit gases from both ends. Is it possible that the siphon may act as a source of smells finding their way into houses? *A.*—Mr. Baldwin Latham says in his Book on Sanitary Engineering that he would not be afraid of gas which had passed through water.

Q.—Are you inclined to believe the water seals are only water seals in name? *A.*—They are real water-seals if the gas has an easier means of escape.

Q.—If we do away with the siphons, will the gas pass more easily? *A.*—Certainly.

Q.—You still believe in the siphon as a check for the passage of smells into houses? *A.*—They are a very good check.

Q.—And you don't believe they are to a certain extent a block to the exit of water from the *nahanis* and other places? *A.*—No, they form no block to the exit of water.

Q.—If they choke, they do? *A.*—Apart from choking, I cannot consider them an obstruction to the passage of water.

Q.—You say it is the smell of the down-take pipes which gets into the rooms? *A.*—Yes.

Q.—And no other cause? *A.*—No.

Q.—Is it not a regurgitation? *A.*—From where?

Q.—The house-drains? *A.*—It would have to pass through the water in the gully trap and then go up the down-take pipe, refusing to escape in the most natural way by the numerous open disconnections provided.

Q.—You attribute the smell to the down-take pipe and not to the other cause? *A.*—Yes.

Q.—Do the down-take pipes get corroded? *A.*—Yes, in time.

Q.—What time, 3 or 4 years? *A.*—Oh, no, they would not become unserviceable in so short a time. I should give them from 20 to 30 years.

Q.—There are certain pipes which are corroded and we can see the water issuing through the side. I will point out a house? *A.*—That would occur, not from corrosion, but from some one having cracked the pipe.

Q.—I cannot tell you positively. You say they don't corrode for 20 or 30 years. What sort of drainage is put in the houses in Parsi Bazaar Street, is it the same old masonry drains? *A.*—Nothing has been done in the houses.

Q.—I found in a house recently that the water oozed out from the floor and actually collected some inches deep; what is that due to? *A.*—To the drains in the house being choked. It would come out in a majority of cases through the covering stones.

Q.—These must be old masonry drains, and there can be no joints? *A.*—They are not in one continuous piece, there must be joints, and it would be easy enough for sewage to pass out from the covering stones.

Q.—In this case whose duty is it to see the thing is remedied? *A.*—The house-owner.

Q.—If he does not do it we can prosecute him? *A.*—Yes.

Mr. Blaney: One question in connection with what Dr. Katrak has put to you. I understand he has examined a great number of houses which have all party walls and no sweepers' gullies, and where the drains go under the basement; some of these houses, Mr. Smith, are 40, 60 and some 80 feet long and have one drain under the basement? *A.*—Yes.

Q.—Is there any possible means of preventing choking except by taking up the drain? *A.*—Well, the drains, to begin with, are of an unsatisfactory shape, they are square, flat bottomed drains.

Q.—Some have been put in by our Engineers or by their advisers. There are varieties, I admit? *A.*—If pipe drains were substituted they would be more likely to keep clear and special arrangements could be made for flushing.

Q.—We don't do it? *A.*—No work in respect of drains inside the houses has been undertaken at all.

Q.—But no man would carry out such a drainage system as that in the Fort. There can be no two ways, it is life and death? *A.*—We have done nothing inside the houses, and nothing to the house gullies in the Fort except at the lower end; only just sufficient to collect the sullage and pass it into the new street sewers.

Q.—You know as a fact that it must be so, that where a house is sewered under the basement there is no means of getting ventilation, and that the house must be damp and unwholesome? *A.*—Undoubtedly.

Mr. Cowasji Pestonji (to Mr. Smith): Are the drains tested by peppermint and ammonia? *A.*—No, by smoke, or with water.

Q.—How often? *A.*—After completion.

Q.—Not whilst in a working state? *A.*—No.

Q.—There may be some leakage in the joints and the escape of gases take place? *A.*—They are not tested after having been passed as in working order.

Q.—Do you think it is necessary to test them? *A.*—I think not.

Mr. Blaney: At the examination of the house drains in Glasgow five years ago, 60 per cent. were found to be unable to stand the smoke test.

Mr. Smith: There they are in the unfortunate position of having drains inside the houses.

Examination of Mr. C. C. James, Deputy Executive Engineer.

The Commissioner: You are in charge of the Drainage Department, Mr. James? *A.*—Yes, I am.

Q.—Since when? *A.*—5th December last.

Q.—Have you been in charge of the house-connection work in the first section and undertaken under a resolution of the Corporation? *A.*—Yes.

Q.—That work has now been stopped? *A.*—Yes.

The Commissioner: I think I have no more questions to ask.

Mr. Blaney: Did not you say, Mr. James would put in the red model?

The Commissioner: Yes. (To Mr. James.) You see that model? *A.*—I do.

Q.—What is it? *A.*—A modification of house-connections under certain circumstances as represented by the Health Officer. The upper part was in existence when I made the lower part.

Q.—What was the upper part made for? *A.*—Merely to show a cistern head and *nahani* connection.

Mr. Blaney: I think I can tell you the history of that model. It was made by Major Tulloch to show a splendid water closet of Mr. Arthur Crawford's. Mr. Smith: The model was made long after Major Tulloch's time.

The Commissioner: I have a question arising out of one made by you, Mr. Chairman. I did not question Mr. Smith as I thought the answer would come more suitably from Mr. James. (To Mr. James.) Attention has been drawn to the fact that there are in the first drainage section a good many cases in which a pipe of larger dimensions, 4″, is connected with one of 2½″ below, the question rises as to the capacity of the smaller pipe to carry away the water put into the larger one; why was it done? *A.*—Because the 4″ pipes were in good repair, and the first drainage section grant is not a large one, and we have to be careful with the money; and where the pipes were in good order I have left them.

Q.—Will the large pipe carry so much matter that the smaller one cannot take it away? *A.*—Not as a rule, and the cistern head is within reasonable distance of the ground and can be reached with the aid of a short ladder.

Q.—What will a 4″ pipe carry? *A.*—About 1,162 gallons per minute.

Q.—And a 2½″? *A.*—About 350.

Q.—Then there will be a difficulty? *A.*—The 4″ pipe never runs full in any case.

Mr. Blaney: You have never seen it overflow? *A.*—I have seen a cistern head overflow, but that was through a block in the pipe.

The Commissioner: Have these larger pipes only been connected with such a number of *nahanis* as leads you to reasonably suppose that so much water will not be carried off as to choke the smaller pipe? Supposing the larger pipe is connected to a great number of *nahanis*, it might at times be filled at the rate of over 350 gallons a minute, and in that case the smaller pipe would not be able to carry off the liquid? *A.*—I don't know of any such cases.

Q.—Have you left in any large pipe that would lead to these consequences? *A.*—We have always looked into that, and where there was that danger, the large pipe has been removed.

Mr. Blaney: Even in houses with 200 inhabitants? *A.*—Yes.

Q.—You have 2½″ pipes there? *A.*—Yes.

Examination of Mr. James by Mr. Bhalchandra K. Bhatawadekar.

Q.—Do you think it is a scientifically correct thing to do, and from an engineering point of view, to have a large pipe above and a small one below? *A.*—It is certainly better not to do so.

Q.—Is it done with a view to economy? *A.*—In a great many cases, yes.

Q.—Then you admit economy is to be preferred to science? *A.*—I am not prepared to admit that at all. The instructions on this first drainage section are clear that there shall be no excess on the estimates.

Q.—Then you would strictly limit yourself to estimates even though you found you could not do so without prejudicing public health? *A.*—We have no such instructions as that; certainly not. There are instructions that the grant is not to be exceeded.

Q.—Then, when you considered that the joining of the larger and smaller pipes was not good, was it not your duty to report to a higher authority? *A.*—I do not think so; by doing what has been done, economy has been effected and no great harm done. The cistern head is easily got at, and I know of no chokes.

Q.—If cistern heads overflow, it does not matter? *A.*—On the contrary, it is just what should be avoided.

Q.—If you found it you would condemn it? *A.*—We have not found it except in cases of chokes.

Q.—If you found 75 per cent. overflowing, what would be your conclusion? *A.*—I have never found them overflow from water, but from *kutchra*.

Q.—Are you removing the old pipes now and putting in new ones? *A.*—This work was in progress at the time of the resolution of the Corporation, and since then no fresh orders have been given and no new work undertaken.

The Commissioner : Your orders were to stop the work, but finish those house-connections which had been commenced ? Mr. James : No new house-connections have been undertaken except those already under construction.

Mr. BhalchandraK. Bhatawadekar : Do you think $2\frac{1}{2}$" down-take pipes are the proper size ? *A.*—Well, I think under certain circumstances they might be modified.

Q.—What modification would you suggest ? *A.*—Not larger than a 4" in certain cases, and I would grade it, starting with $2\frac{1}{2}$" and giving 4" at the bottom.

Q.—Have you examined the *nahanis* and down-take pipes ? *A.*—Yes.

Q.—Do you think there is a good deal of stench coming from them ? *A.*—I have not noticed it.

Q.—Not in the houses ? *A.*—I have examined lots.

Q.—What hours have you been there ? *A.*—I have been at all times.

Q.—At night ? *A.*—Generally in the morning.

Q.—Just after they have been flushed ? *A.*—I cannot say.

Q.—At night time when the windows are shut, have you experienced a stench ? *A*—No.

Q.—There is a general complaint where the house-connections are completed that the stench coming from the *nahanis* and *morees* is unbearable and abominable ; what do you attribute it to ? *A.*—Because they abuse the *nahanis.*

Q.—With washing ? *A.*—No, by using it for other purposes.

Q.—Are you acquainted with the habits and customs of the people of Bombay ? *A.*—To a certain extent.

Q.—What use do they put the *nahanis* to ? *A.*—For urinating.

Q.—Don't you think that a legitimate purpose ? *A.*—No.

The Commissioner : Not in a *nahani* ; it may be elsewhere, Mr. Bhalchandra Bhatawadekar. *A.*—I think, considering the habits of the people, it is a legitimate use. Would it foul the house-connection ? *A.*—Yes, unless carefully flushed.

Q.—Even in the best of houses there is a complaint of smells, and that, too, with a clean *nahani* ; what do you attribute that to ? *A.*—Is it not from the same cause ? They all used them in the same way.

Q.—The *nahanis* and *morees* were used for the same purpose before the house-connections were made, and it is only since their introduction that the smells have been experienced ? *A.*—I should think the *nahanis* are better now than before.

Q.—But previous to the connections there was no smell except in the gullies, and now, since the house-connections have been put in, the smells have been intolerable, and the *morees* and *nahanis* are only used for the same purpose ? *A.*—I cannot explain that.

The Commissioner : You would require to examine the house ?

Mr. Nanabhai Katrak : But how would he compare it with the former state ?

Mr. Bhalchandra K. Bhatawadekar: I can take Mr. James to the houses; do you think it might be due to an escape of sewer gas? *A.*—Certainly not.

Q.—That is not possible? *A.*—No.

Q.—Not the slightest chance of sewer gas escaping? *A.*—None whatever.

Q.—Do you think the ventilating pipes do their work properly? *A.*—Yes.

Q.—And prevent the escape of sewer gas? *A.*—They don't prevent the escape of sewer gas, they are made for the escape of sewer gas.

Q.—They don't allow it to go into the *nahanis*? *A.*—Oh no.

Q.—What purpose do they serve? *A.*—They remove foul air and gas from the drains.

Q.—And while the gas is travelling through the pipes it does not get beyond? *A.*—It goes out at the end of the vent pipe.

Q.—These pipes don't prevent the gas travelling backwards? *A.*—There is generally one at the head and one at the lower end of the drain and it goes up either of these pipes; there is no other exit.

Q.—Does a ventilating pipe always work in an upward direction? *A.*—That would depend on the atmosphere.

Q.—Night and day? *A.*—I should say at night always. During the day when the atmosphere is heavy, there are times when it does not act for a time.

Q.—Works downwards; do you think at that time it is likely to be forced into the down-take pipes?

A.—The ventilating pipe is the only exit if there is water in the gully trap.

Q.—When some of the pipes are taken out when choked, have you experienced a foul smell coming from them? *A.*—The down-take pipes always get foul to a certain extent.

Q.—No gas? *A.*—No.

Q.—No decomposition of choked up material? *A.*—There is always in a down-take pipe a certain growth that smells to some extent, but no gas.

Q.—You admit the choking? *A.*—No, I say there is always a growth inside the pipes.

Q.—You say they never get choked? *A.*—I would not say that, but not often.

Q.—But from misuse, such as putting in mango stones and foreign substances the lower portion would get choked up and the water get into the upper part; is it not likely that the substances would undergo decomposition? *A.*—I think not, as they would be soon freed.

Q.—Then organic matter will never get decomposed?

The Commissioner: What Mr. James means is that the choking would be found out before the matter had become decomposed. Mr. Bhalchandra's object appears to be to arrive at the conclusion

that organic matter never decomposes. Our object is not to heckle the witnesses but to get at facts.

Mr. Blaney: Quite so.

The Commissioner: You must not pit your medical knowledge against us Dr. Bhalchandra. (Laughter.)

Mr. Cowasji Pestonji: You say there is a growth in a down-take pipe of offensive matter? *A.*—Yes, the pipe fouls to a certain extent.

Q.—Supposing the inside were glazed, would it minimise the nuisance? *A.*—Yes, it might.

Q.—Would glazed down-take pipes be better? *A.*—Yes, but more expensive.

The Commissioner: You might line them with silver, it is not worth much. (Laughter.)

Mr. Meherjibhai Setna (to Mr. James):

Q.—What are the hours when you mostly visit these house-connections? *A.*—Between 7 and 10-30 in the morning.

Q.—Is that the proper time? *A.*—It is not my business to visit house-connections; that is the time I make my rounds.

Q.—But you are the Engineer of the Drainage Department; don't you think the only person to see it is yourself? *A.*—To go into the houses.

Q.—Yes? *A.*—I don't think so.

Q.—Have you ever visited a house about 2 o'clock in the night? *A.*—No.

Q.—I ask you to do so and you will find that your answers will alter a great deal. I would recommend you to do so, go to a large chawl where natives live.

The Commissioner: Mr. James' duty is to carry out the system and house-connections approved by the Municipality. If it is any one's duty to visit the house-connections it is the Commissioner's and the Health Officer's. The system has been long approved.

Mr. Blaney: Yes, but Mr. James might have some ideas of his own; I believe he is a clever fellow.

Mr. Meherjibhai Setna: It seems he should make these visits as Engineer.

The Commissioner: But if he and I were to be found walking into a chawl at 2 o'clock in the morning we might be suspected of some wicked design, trespass, or intrigue, or something of that sort. (Laughter.)

Mr. Meherjibhai Setna: You might go with due notice.

The Commissioner: If I did I should expect to find something made to order.

Mr. Bhalchandra K. Bhatawadekar: I omitted one question, I should like to have answered. (To Mr. James.)

Q.—What is your opinion of the model you have put in? *A.*—In certain cases I think it might be used with advantage, but it is not a sanitary thing.

Q.—In what cases would you use it? *A.*—In the cases of one-roomed chawls where people habitually bathe outside the rooms and proper connections cannot be made. In such cases it would be an advisable arrangement.

Q.—What are its advantages? *A.*—I think it has no particular advantage except where people will wash in the streets in front of the chawl.

Q.—Then it has no particular advantage? *A.*—That is its only advantage. You must take each building on its own merits.

Q.—Has it any disadvantage? *A.*—You would have always the smell from the wet surface of sullage water.

Examination of Mr. James by Mr. Nanabhai Katrak.

Q.—The floor of the model is paved with cement? *A.*—No, with Indian patent stone.

Q.—Any special reason for that? *A.*—No, except it is a good stone, easily moulded and very durable.

Q.—Are the floors of the gullies also water-tight? *A.*—No.

Q.—They allow water to percolate and absorb? *A.*—Yes.

Q.—But that is not sanitary? *A.*—Well it is going back to the old condition of things.

Q.—It gives off smells continuously? *A.*—Yes.

Q.—But the sullage decomposes quickly in the sun? *A.*—Yes.

Q.—Is it better that it should be decomposed in the sun and made inocuous. *A.*—No, I think it is better to send it straight into the sewer.

Q.—Is it not possible that a smell continuously in the open air is less harmful than the concentrated gas of the sewer? *A.*—If you let the gases get out, but under the present system I don't think they do.

Q.—Then you don't believe there is any regurgitation of sewer gas?

The Commissioner: I have heard the word "regurgitation" used many times; I should like to know what it means; I know what it is supposed to mean—the act of pouring or bubbling back. Sewer gas coming from a sewer into a house connection is not a regurgitation.

Mr. Nanabhai Katrak (to Mr. James):

Q.—But sewer gas does get into the houses? *A.*—Not if the house-connections are in good order.

Q.—There is no siphon in the gully? *A.*—No.

Q.—And the present tendency is to do away with siphons? *A.*—You refer to wall siphons?

Q.—Yes? *A.*—That is so.

Q.—What are the wall siphons for? *A.*—To keep out foul air.

Q.—Something like water seals? *A.*—They are water seals.

Q.—That is, they are meant to prevent gases getting into houses? *A.*—Yes.

Q.—Do you believe they serve the purposes for which they are used? *A.*—They do.

Q.—Do you believe that by their removal we have increased the danger? *A.*—Yes.

Q.—So, in choosing one of the two evils—the choking and the passage of gases into the houses—the Municipality has chosen the second, and you consider it is less dangerous than the other mischief? *A.*—Yes; not the sewer gas, but the smell.

Q.—You consider the introduction of smells is less dangerous than choking. *A.*—Yes, but there is a disconnection.

Q.—Is the increase of smells due to the doing away with the siphons? *A.*—It may be, although I would not be prepared to say it was.

Q.—The increase of smells is said to be due to the foulness of the down-take pipe? *A.*—Yes.

Q.—Is that the only cause? *A.*—It could be the only cause.

Q.—There could be no other? *A.*—Certainly not.

Q.—Glazing would cost a heavy sum? *A.*—It would be expensive.

Q.—Can the iron pipe be galvanized inside? *A.*—You would gain no advantage.

Q.—Glazing would be the only advantage? *A.*—Yes.

Examination of Mr. James by Mr. Ardasir D. Mody.

Q.—By adopting this model there would be one great advantage? *A.*—Yes, because there would be no pipes.

Q.—The people need not wait for a man to come to clean them, but can do it with the hand? *A.*—Yes.

Q.—They could remedy a choke for themselves? *A.*—Yes.

The Commissioner: So they can now if they like.

Mr. Nanabhai Katrak: I think the Hindus would die rather than touch it.

Mr. Ardasir D. Mody (to Mr. James):

Q.—At present there is a great difference of opinion as to whether the sewer gas passes from the street sewers into the pipes through the water seal; is there no test for it to be certain there is no sewer gas? *A.*—One could test it by opening up the pipes.

Q.—Is there no test to see that the water seals are perfect? *A.*—Not without looking at the siphon and seeing how it worked; if the siphon remains intact and unbroken, it could not get into the pipe.

Q.—But the water may become saturated, by sewer gas, is there no test to satisfy yourself? *A.*—I know of none.

Mr. Nanabhai Katrak: Sulphate of hydrogen would test it.

Mr. Ardasir D. Mody:

Q.—Do the siphons work in the manner they ought to? *A.*—I have not opened up a siphon, but I know how they do act.

Q.—Do they act well? *A.*—We cannot see them because they are under ground, but I think they do act well.

Q.—If there is an escape, how do you know it? *A.*—By smelling.

Q.—That is deceptive at times. There is one great danger, and that is, if the sewer gas has been escaping into the *nahanis*, we have been poisoning the people ? *A.*—Quite so.

Q.—Have you satisfied yourself ? *A.*—I am satisfied that there is no such escape going on.

Q.—Have you satisfied yourself by a test ? *A.*—No.

Q.—House-connections are made by contractors ? *A.*—Yes.

Q.—Is there supervision ? *A.*—Yes.

Q.—When you take charge of a house-connection, do you satisfy yourself that it has been put at a proper level and has good joints ? *A.*—Most decidedly ; great care is taken about that.

Examination of Mr. James by Mr. Kaikhosro N. Kabraji.

Q.—Were you in charge of the department when the Queen's Road drainage section was completed ? *A.*—No.

Q.—Which were the sections under your charge ? *A.*—You mean the sections for new work ?

Q.—Yes ? *A.*—We have done work in Girgam and Bhuleshwar. I was not on the Queen's Road section.

Q.—It was not built more than 9 months ago ? *A.*—That was about the time I joined the Drainage Department,

Q.—What is the machinery of supervision on the part of the Municipality ? *A.*—The city is divided into blocks, and in each place there is a Surveyor who has three or four men under him, and one Chief Inspector over the whole.

Q.—Is the Surveyor expected to inspect every *nahani* and every house ? *A.*—Yes ; before any work is started, a plan is made showing the connections, in pencil and when finished they are completed in red.

Q.—When the pipes are being put in, is there any one to see they are properly fixed ? *A.*—Yes ; they are carefully inspected with regard to joints, and no excavation is filled in before the pipes are looked at and discs run through and the greatest care taken.

Q.—When a house is being connected, it has three or four tenants on different floors ; supposing the occupier of one floor goes away whilst the construction is going on, what provision is made for connection with that floor ? *A.*—The connection is made from outside.

Q.—But the outlet of the *moree* cannot be done except from inside ? *A.*—The end of the pipe is put through the wall and cemented in, and if it is not possible to go into the house, then it is finished afterwards, but I have not known of such a case.

Q.—But the tenants go away sometimes ? *A.*—I have not seen one, but if there was such a case, the grating would be put in afterwards.

Q.—During the course of construction of house-connections I suppose there is a danger of the walls of a house giving way ; in such cases, are the connections left undone ? *A.*—If the house was a doubtful one, it would be handed over to the Building Department, and, if they certified it was safe, the work would go on.

Q.—And if unsafe? *A.*—We have not had such a case; we should probably nail the cast-iron pipes into the wall; but that depends on the house; I could not say exactly what one would do, as there are several expedients.

Mr. Meherjibhai Setna: Mr. James, have you received any special training for the conduct of this drainage system? *A.*—What do you mean by special training.

Q.—This is a special branch of sanitary engineering, have you received any special training? *A.*—I was on drainage works in England for some years.

Q.—In this particular branch of engineering? *A.*—Yes, for several years.

Mr. Nanabhai Katrak to Mr. James: Do inspectors perform their work to your satisfaction? *A.*—I think so.

Q.—Don't you think that men of education, engineers and medical men would do the work better? *A.*—Could you get a medical man for Rs. 150 per month to do the work?

The Commissioner: I would undertake to get them. (Laughter.)

Mr. Murzban: Do you mean as directors or inspectors?

Mr. Nanabhai Katrak: I mean inspectors.

Mr. James: I don't think they would do the work better than the present inspectors.

Mr. Blaney (to Mr. James): I wish to ask you as a sanitary engineer, whether you are of opinion from your knowledge of Bombay—I may put it in parenthesis—that the tenement houses of Bombay chiefly are not connected together by party walls, but are separated by sweeper's gullies. Are you, as a sanitary engineer, of opinion that these gullies are not laid with a fall sufficient to carry away any liquid that may be thrown into them; they contain liquid at all times giving smells from the filthy sewage? *A.*—In most cases they are laid with sufficient gradient, but in some they are not.

Q.—In some of the passages sewage lies deep, there are mosquitoes in millions, and the black stuff gives rise to smells which enter the windows. Don't you think that, as part of the house-connection system, that these great houses with two or three hundred inhabitants, that some regard should have been paid to these passages to make them with a proper slope so as to carry away all filthy matter and enable them to be flushed with Tansa water which was got for that purpose? *A.*—Yes, I think so.

Q.—Don't you think it would be a good thing if adopted, whatever the cost? *A.*—A very good thing.

This concluded the examination of Mr. James. The Committee then adjourned until Friday, the 5th August, and Mr. Weir, the Health Officer, was asked to be present for examination on that day.

BOMBAY, *5th August* 1892.

AT the meeting of the Committee held this day, there were present :—

Javerilal U. Yajnik, Esq., *President;* Ardasir D. Mody, Esq.; Brigade-Surgeon-Lieut.-Col. S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; Fardunji N. Bisni, Esq.; W. C. Hughes, Esq.; Kaikhosro N. Kabraji, Esq.; Muncherji C. Murzban, Esq., C.I.E.; Nanabhoy N. Katrak, Esq.; Pherozeshah M. Mehta, Esq.; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C. S., Commissioner; the Acting Executive Engineer; the Health Officer; and the Secretary.

The minutes of the meetings held on the 29th ultimo and 1st instant, were signed.

The President: I may inform the Committee that the evidence, as taken so far, extends to nearly 100 pages with the accompaniments, and I think it desirable that the pages already printed should be circulated amongst members of the Corporation, otherwise they may not have time to read the evidence when it has accumulated to a large volume. If you have no objection I will ask the Secretary to circulate the printed matter so far as it has gone.

Mr. Pherozeshah M. Mehta: Will that involve extra cost?

The Secretary: No.

Mr. Pherozeshah M. Mehta: I think it is very desirable that the matter should be circulated.

The Secretary: It is understood, then, that I should circulate the evidence at once?

The Secretary read the following letter, addressed to himself, dated 3rd instant :—

DEAR SIR,—I am in receipt of your letter asking me to state on what date I would like to give evidence before the above Committee. Friday, the 12th instant, at 3 p.m., would suit me.

I do not know if any other witnesses unconnected with the Municipality are to give evidence. I think it would facilitate an exhaustive inquiry into the subject if your Committee were to propound a series of printed questions, leaving each witness, after replying to these questions, to make any further statements which would elucidate a proper solution of the problem.—Yours truly,

D. GOSTLING.

It was decided to invite Mr. Gostling to be present at the meeting of the Committee on the day mentioned.

Mr. Smith put in copies of notices issued from time to time to house-holders warning them against the misuse of house-connections. Also the following as to the capability of discharge of a $2\frac{1}{2}''$, 3" & 4" vertical pipe :—

NOTICE.

Whereas the fittings fixed against or attached to houses and buildings for the passage of sewage to the public sewers are occasionally found to be choked through *kachra* or improper substances not intended to be conveyed away by the sewers having been thrown or placed in such fittings.

Now this is to warn the owners and occupiers of houses that for such actions, whether of themselves, of their servants, or of members of their families or households, they render themselves liable to a penalty of rupees fifty, as well as to a daily penalty under sections 217 and 218 of the Bombay Municipal Act of 1872 and 1878, copies of which sections here follow for information.

Throwing rubbish, &c., into sewers, streets, &c.

217. Whoever throws or puts or whoever permits his servants or any member of his family or household to throw or put anything that is, or may be, a nuisance, into any street, sewer, drain, culvert, tunnel, gutter or water-course, whether natural or artificial, belonging to the Corporation, or into any drain, gutter, or water-course, communicating therewith, or whoever obstructs the same without the consent in writing of the Commissioner, or whoever uses a house or surface drain as a receptacle or deposit for night-soil without such consent as aforesaid, shall be punished with fine which may extend to rupees fifty, and to a further penalty not exceeding five rupees for every day after conviction during which the offence is continued.

Penalty for nuisance on house or land.

218. Whoever, being the owner or occupier of any house or land, causes or allows any matter whatever, which is or may become a nuisance, to soak through any building or part of a building or wall, or to run, drain, fall or be thrown therefrom, or whoever keeps or allows to be kept in or upon any house or land anything, or any animal, in such a way as to be a nuisance, shall be liable to a penalty not exceeding fifty rupees, and to a further penalty not exceeding ten rupees for every day after conviction during which the offence is continued.

Municipal Commissioner for the City of Bombay.

MUNICIPAL OFFICE,
BOMBAY 1885.

Approved.

(Sd.) H. A. ACWORTH.

[Translation of the same in Marathi.]

INSTRUCTIONS TO HOUSE-HOLDERS TO BE OBSERVED WITH REFERENCE TO HOUSE-CONNEXIONS.

I. It should be clearly understood that house-connections, *i.e.*, cistern-heads, wall-siphons, down-take pipes, gully-traps and drain pipes are intended only for the passage of liquid matter.

II. No solid substances whatever should be allowed to pass into the house-connections, and house-holders should be especially careful to prevent persons from putting wood-ashes, sand, earth, powdered bricks, food-refuse, leaf-plates, fruit and vegetable parings, rags, &c., into any receptacle or sink connected with the house drains. Such articles should be deposited in the public dust-bins; and it should not be endeavoured to dispose of them by means of the sewers.

III. It is the duty of a house-owner to see that the gratings on the *nahanis* are not removed, but that they are kept intact, and that accumulations in front of them are properly removed.

IV. It is the duty of the house-holder to see that the house-connections, viz., cistern-heads, wall-siphons, down-take pipes, gully-traps and house-drains are kept in proper working order; and in the event of any of them being blocked, he should have the defect immediately remedied. If he is unable to do so himself or by the inmates of the house, he should forthwith employ the services of a licensed plumber.

V. No attempt should be made to remove obstructions from house-connections by violently inserting sticks or iron bars into them. Violence is particularly to be avoided in dealing with house-connections.

VI. A pail of water suddenly discharged into a gully-trap will often clear the obstruction without anything further being done. In all cases, where possible, this remedy should be at once applied.

VII. If house-holders will only adhere to these instructions and see that they are observed by the inmates of their houses, they will soon learn by experience not only that the house will be free from sewer air and foul smells, but that obstructions in the house-connections will never occur, and no foul matter will ever overflow into road-side drains and house-gullies. There are many large buildings in this city which have been fitted for some years with similar house-connections, and obstructions therein are unknown, thus showing that with ordinary care the inconvenience and discomfort of blocked house-connections may be avoided.

VIII. House-holders being responsible for the proper working condition of their house-connections are hereby warned that, in cases where repeated blockings take place, the Municipal Commissioner will insist on the addition of special fittings for the interception of solid substances, and that the cost of such fittings will be recovered from the house-holder.

RIENZI WALTON,
Executive Engineer, Bombay Municipality.

MUNICIPAL OFFICE,
BOMBAY, 10*th July* 1891.

[NOTE.—The above in Guzerathi and Marathi also.]

MUNICIPALITY OF BOMBAY.

NOTICE.

Whereas the fittings fixed against or attached to houses and buildings for the passage of sewage to the Public Sewers are sometimes found to be stopped up through *kachra* or improper substances, not intended to be conveyed away by the sewers, having been thrown into or placed in such fittings; and Whereas such fittings are sometimes found to have been removed, the attention of all parties concerned is drawn to the following provisions of section 258 of the City of Bombay Municipal Act, and they are warned that for every such act, as therein described, a person renders himself liable under section 471 of the said Act, on conviction before a Magistrate, to a fine of Rs. 100.

Section 258.—No person shall,—

(*a*) in contravention of any of the provisions of this Chapter, or of any Notice issued or direction given under this Chapter, or without the written permission of the Commissioner, in any way alter the fixing, disposition or position of, or construct, erect, set up, renew, rebuild, remove, obstruct, stop up, destroy, or change any drain, ventilation shaft or pipe, cesspool, water-closet, privy, latrine, or urinal, or any trap, covering or other fitting or appliance connected therewith;

(*b*) without the written permission of the Commissioner, renew, rebuild, or unstop any drain, ventilation shaft or pipe, cesspool, water-closet, privy, latrine or urinal, or any fitting or appliance, which has been or has been ordered to be discontinued, demolished or stopped up under any of the provisions of this Chapter;

(*d*) drop, pass or place, or cause or permit, to be dropped, passed or placed into or in any drain, any brick, stone, earth, ashes, or any substance, or matter by which or by reason of the amount of which, such drain is likely to be obstructed;

(*e*) pass, or permit or cause to be passed into any drain provided for a particular purpose, any matter or liquid for the conveyance of which such drain has not been provided.

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H. A. ACWORTH, C. S.,
Municipal Commissioner
for the City of Bombay.

MUNICIPAL OFFICE,
BOMBAY, 1892.

[Here follow translations of the above in Guzerathi and Marathi.]

Memo :—

A 2½" pipe if vertical is capable of discharging 350 gallons per minute.
A 3" pipe if vertical is capable of discharging 560 gallons per minute.
A 4" pipe if vertical is capable of discharging 1,160 gallons per minute.

House-connection Establishment.

No. of men.	Designations.	Amount of salaries per month.			
		Rs.	a.	p.	
1	Sub-Inspector	50	0	0	
1	Do.	40	0	0	
2	Sub-Inspectors at Rs. 30 each ...	60	0	0	
2	Fitters at Rs. 15 each	30	0	0	
5	3 Halalkhor Mukadams provided in the Drainage Branch Schedule at Rs. 15 each ... ...Rs. 45 1 Halalkhor Mukadam charged to Agripada H. C. works... ...Rs. 15 1 Halalkhor Mukadam charged to 1st Drainage Section ... ...Rs. 15	75	0	0	
84	43 Halalkhors provided in the Drainage Branch Schedule at Rs. 11-8-0 each Rs. 494-8-0 35 Halalkhors provided in the Health Department Schedule at Rs. 11-8-0 Rs. 402-8 0 6 Halalkhors charged to Agripada H. C. works at Rs. 11-8-0 Rs. 69-0-0	966	0	0	
95	Total ...Rs.	1,221	0	0	
	From 300 to 400 gully traps can be cleaned and kept in working order by one man.				

Mr. Smith: With regard to the complaint of Messrs. Morenas & Co., of a smell at the entrance of their shop, I have referred to the papers and find the following are the facts :—

"*Particulars of complaint made by Messrs. Morenas & Co., of 15 Meadows Street, Fort, in December* 1891, *regarding a smell at the entrance to their shop.*

It was found that the smell arose from their own house drain being choked. The drain runs from the cook-room and through the shop to the street. The drain was opened by a Municipal Inspector who found it choked with broken chinaware, glass-bottles, chop-bones, coir, probably used in cleaning cooking utensils, sand, ashes, pieces of country tile, and corks of soda-water bottles.

When the mass had been partially removed, water was poured into the drain from the cook-room and this washed out a quantity of stinking black mud which seemed to be composed to a great extent of decaying saw-dust such as is used in preserving ice."

Mr. Smith: I wish also to be allowed to put in this paper on the absorption of sewer air by water in the traps.

Extract from Mr. Baldwin Latham's "Sanitary Engineering," page 425.

"Dr. A. Fergus says: 'Sewer air is absorbed by the water on the sewer side of the trap and discharged from the house end of it.' One thing is certain with reference to malaria, that all authorities are agreed that it is never extricated from a water surface. It is only after a swamp has become dry that malaria makes its appearance and commits its ravages. If we admit with Dr. Fergus that sewer air may be passed through the water of a trap, we may be assured, on the other hand, that any thing injurious held in the sewer air would be washed out and remain harmless in the water of the trap; for, however offensive, and however overloaded water may become, so long as water remains, all experience goes to prove that no evil consequences follow. This was abundantly shown by the condition of the water of the Thames in the dry year of 1858, when, burdened as the water was with sewage—so much so, that the stench given off was unbearable, yet we find that neither the health of London generally nor that of those living near the river suffered from the consequences, but that this particular year was one of the healthiest known in London."

Dr. A. Fergus on water trap.

Malaria never extricated from a water surface.

Water washes sewer air.

Evidence of condition of River Thames in 1858.

Mr. Blaney: That refers to England.

Mr. Smith: Yes, to England.

Examination of Surgeon-Major T. S. Weir, Health Officer of the City, by Mr. Blaney.

Q.—Are you in charge of any of the sewers; if so, which? *A.*—The Health Department is in charge of the old system of sewers.

Q.—Complete charge? *A.*—Complete charge.

Q.—Nothing to do with the new sewers? *A.*—No.

Q.—Are you consulted by the Engineer with regard to house-connections? *A.*—I think not.

Q.—In any way consulted, with regard to construction design, or the whole principle of house-connections? *A.*—Well, I was consulted originally in regard to drainage, but I do not recollect

that I was consulted in respect to the present system of house-connections, except in so far as the necessity for house-connections which I have always advocated.

Q.—The design? *A.*—No.

Q.—Do you know if any changes have been made in any part of the house-connections since the new drainage system was commenced? *A.*—The system of 1878?

Q.—Yes? *A.*—I notice a change in detail with regard to what may be called wall siphons; they are not so general as they were in the first portion of the scheme.

Q.—Then, were you a consenting party to these changes; did you give your official consent, or was it asked for? *A.*—The changes were not referred to me officially.

Q.—Is sanitary engineering a part of your speciality? *A.*—I would have some difficulty in answering that question.

Q.—Up to a limited extent? *A.*—I hope so.

Q.—That is you know about drains and house-connections? *A.*—I have a knowledge of certain general principles which I hope has been strengthened by experience.

Q.—Increased very much by experience? *A.*—I hope so.

Q.—Do you think yourself competent to advise the Drainage Engineer on any matters connected with house-connection pipes, house drains, traps, flushing and ventilation? *A.*—I am only competent to give an opinion in regard to certain general principles and the application of these to the city.

Q.—And to public health? *A.*—Yes.

Q.—Do many house-connections of the new system get obstructed and overflow? *A.*—Yes, they very frequently become obstructed.

Q.—Do they become a nuisance? *A.*—Yes, whilst obstructed.

Q.—What kind of a nuisance? *A.*—The nuisance from an obstructed house-connection is just the same as a nuisance from an obstructed sewer.

Q.—There is a formation and dissemination of sewer gas? *A.*—If a pipe becomes obstructed, it becomes a cesspool.

Q.—Do you know, perhaps you don't, but if you do you might tell me, what system is adopted by the Engineering Department for inspecting house-connections and removing obstructions? *A.*—I can only answer as far as observation goes; I see halalcore constantly engaged in examining and removing obstructions.

Q.—You say in your quarterly report, which is now before the Corporation and this Committee, "The only use of siphons seems to me to be to intercept—to do no more than intercept solid matter and so cause obstruction?" *A.*—Yes.

Q.—Do you think the siphons act injuriously? *A.*—I think, considering the necessities of most people for whose use the house-connections are, that the siphons do act injuriously, and I consider the difficulties arising in the present system, so far as the poor classes are concerned, are chiefly due to siphons. I admit, however, the scientific arguments in favour of siphons, which are perfectly true.

Q.—Is the water seal to be relied on even when the trap is not obstructed? *A.*—My views are perhaps different on that subject to other people's. I may be right or I may be wrong. For instance, in this office (Municipal Office) what is called a water seal is not a seal. The siphon is foul or not according to the purpose to which the pipe leading to the siphon is used. It may be used as a urinal or as a latrine.

Q.—And if so, it becomes a nuisance? *A*—It must be a nuisance.

Q.—Then, the water seal is not to be relied on? *A.*—In regard to sewer gas.

Q.—For the preservation of health? *A.*—Of course in regard to the interception of sewer gas the same.

Q.—I would rather you did not put it that way just now? *A.*—I would put it in that way so far as public health is concerned; the water seal is not to be relied upon, because it, or, the pipe going to it, is used for urinating and defecating. I don't wish my reply to cover the purpose which the siphon is supposed to answer in regard to the interception of sewer gas. In siphons filled with pure water the water intercepts gases. You may take the familiar instance of the human intestines; there you have a series of siphons and we know how they answer.

Q.—But a vital process is going on in the human intestines. I think that is rather a far-fetched illustration. If the same vital system was going on in a house-connection it might hold good. It is a far off illustration? *A.*—I think it is a very near one.

Q.—Have the siphons a peristaltic action. (Laughter.) A man also takes a glass of beer or a little ginger occasionally which the siphons don't get, so the analogy is difficult to understand. However, you may put it in. Do these traps or siphons generally contain solids even when not obstructed by such solids; that is, they are sometimes completely choked and sometimes to a lesser extent? *A.*—Traps or siphons underneath pipes coming from rooms in which the poor classes live, generally contain solids; they must or it would not be necessary to clean them.

Q.—You have found it so in your experience? *A.*—Yes.

Q.—You say in your report you are certain that for chawls, the best outlet for room drainage is an open drain constructed with best cement and having water flowing down it? *A.*—Yes.

Q.—Will you kindly explain the details of this proposal and point out the sanitary advantages? *A.*—My ideas have already been put into form. As the result of several discussions with Mr. James and Mr. Smith. Mr. James has put my ideas into the shape of this model (red), except in so far that I think the down-take pipe should be 4″.

Q.—If it was 6″ would it be better? *A.*—Also in regard to the trap at the end; I don't approve of the siphon at the end. I think in the case of the poorer classes it would be better to have intercepting catch-pits with a moveable bucket which could be easily cleaned.

Mr. Nanabhai N. Katrak: And no siphon? *A.*—No.

Mr. Blaney: Do you think that throughout the city in tenement houses 6" pipes would be better; it is not a question of economy now but public health? *A.*—I think that amongst the poorer classes and amongst those Hindus who eat on *leaves* and put them down the *morees*, the larger the pipe the less the chance of obstruction.

Q.—But as to the sanitary advantage of your system? *A.*—There are three advantages—first the financial, it is much cheaper; second, solid matter, such as leaves, sand, wisps of straw, will be intercepted instead of going down a trap; and third, it will prevent any possibility of the access of sewer air to the houses.

Q.—And therefore benefit public health? *A.*—Yes, I think so.

Q.—About these catch-pits, have you anything more to say about their size or the facility for cleaning? *A.*—Of course my own personal view is that it would be better if the catch-pits were twice their size instead of 4" by 4"; I would make them 8" by 8". As a matter of common sense the easier it is to clean a catch-pit the better.

Q.—If such catch-pits were periodically cleaned, would it improve health? *A.*—Certainly.

Q.—It comes to this, you think it is a practical recommendation? *A.*—I mean it in that spirit.

Q.—Not theoretical merely? *A.*—I think if you want a theoretical system, a good system from a theoretical point of view, you have it in the present system.

Q.—Do people generally flush their own down-take pipes and house drains? *A.*—With the people living in chawls, their chief desire is to get food when they come home from work, to cook and not to trouble themselves about flushing pipes.

Q.—You know they don't do it? *A.*—Of course they don't.

Q.—The down-take pipes are frequently choked and made filthy by night-soil and urine? *A.*—Yes.

Q.—Would a water closet system change the habits of the masses and induce them to abolish *nahanis* and *morees* and do away with all down-take pipes except from cooking places? *A.*—I don't think so; certainly not.

Q.—It would be against their caste. If house drains contain deposits, is sewer gas generated and retained in that deposit until a heavy flush of water comes to release some of it? *A.*—Yes, it would be.

Q.—Does that gas when released find its way into the windows of the adjoining houses, if two houses are separated by a narrow sweeper's gully? *A.*—Of course all gases have a tendency to find exit by the easiest way of escape.

Q.—And between two walls closely together it must go upwards? *A.*—It has a tendency to be attracted to the hottest quarter, which is the house.

Q.—Do you think the system of house drainage should be altered in tenement houses from a closed to an open system? *A.*—Yes, I think so.

Q.—Are three-fourths of the houses in Bombay tenement houses or houses occupied by more than one family? *A.*—I cannot answer that question without referring to my Census tabulation.

Q.—A very large portion? *A.*—Certainly.

Q.—Is this the general system of living in Bombay? *A.*—Yes.

Q.—Is it adopted to secure cheap house-room, and are people forced to live in this way by their poverty? *A.*—That is the chief cause, undoubtedly.

Q.—Is there much overcrowding in chawls? *A.*—Very great.

Q.—Does this overcrowding cause disease? *A.*—Undoubtedly.

Q.—Do you believe it is the greatest factor in the mortality returns? *A.*—I think it is one of the greatest factors.

Q.—The three great factors seem to be—bad infant-feeding, bad drains, and bad over-crowding—but the Health Officer must know? *A.*—Yes, that is so, overcrowding is undoubtedly one of the greatest factors. In my Census Report I give some startling figures of the degree of overcrowding in Bombay, the foul air from the human body being as bad as that from sewers, and all you have to do is to confine the air from human bodies and you will poison people just as readily as with sewer air.

Mr. Pherozeshah Metha: You frighten us Dr. Weir. (Laughter.)

Mr. Blaney: Is it therefore more necessary to provide the best sanitary description of house-connections and house drainage in chawls and tenement houses than in other houses and to provide such a system as the people cannot put out of order and destroy? *A.*—I think so.

Q.—Is much of the fever that prevails in tenement houses in Bombay due to overcrowding within, aided by insanitary surroundings without? *A.*—Certainly, I have no hesitation in replying positively.

Q.—Are the house drains flushed? *A.*—Yes.

Q.—How, and when and with what effect? *A.*—I cannot well describe the details, but they are flushed.

Q.—Automatically or by persons? *A.*—By persons.

Q.—They get the water from somewhere and pour it into siphons? *A.*—Yes.

Q.—In your evidence you said that free and copious flushing of drains will not necessarily remove all deposit, because some of it is very tenacious and hard. If this is true, these house drains are as bad after flushing as before, that is to say, as far as their freedom to discharge sewage gas is concerned? *A.*—It is unfortunately true to a great extent; it is extremely difficult to remove deposit in drains by flushing.

Q.—There is therefore the greater recommendation to have it open. *A.*—Yes.

Q.—You have said it is in these sewer deposits that the most dangerous sources of sewer gases are to be found; are you still of that opinion? *A.*—Yes.

Q.—You have said that the ordinary temperature is sufficient to produce rapid decomposition in sewage, especially in the hot

weather ; then it follows that as soon as decomposition takes place sewer gases begin to form ? *A.*—I think there is a continual formation of sewer gas.

Q.—How soon may decomposition begin in a sewer in the hot weather ? *A.*—I think it is continuous.

Q.—That is a better answer still. Is decomposition retarded or lessened by free exposure and by sunlight ? *A.*—Of course, decomposition is increased and rendered innocuous.

Q.—That is the point, you may breath over it, for it is rendered innocuous. Are disease bacteria formed in closed sewers, and under what circumstances ? *A.*—That is a question I cannot answer right off, there are so many theories with regard to bacteria. It is a theoretical question.

Q.—They do exist ? *A.*—Not in large numbers in sewers. That is the general result of the information we have.

Q.—These disease bacteria are dangerous to health ? *A.*—There is a great deal of difference of opinion on the subject. Some authorities hold a bacteria theory whilst others reject it.

Q.—These are deep questions, I will not go into them. Whence are sewer gases derived ? *A.*—From the sewers.

Q.—Or organic matters ? *A.*—Yes, exactly.

Q.—Can you name them and give their compositions ? *A.*—Yes, there is, carbonic acid, sulphuretted hydrogen, caburetted hydrogen, ammonia sulphide, and nitrogenous matters.

Q.—Are they all injurious to health ? *A.*—Yes.

Q.—Does a humid atmosphere hasten decomposition in sewers ? *A.*—Yes.

Q.—Then do sewers require more than ordinary care and supervision in the hot and rainy months ? *A.*—On that there is a difference of opinion. Sewers attract more attention in the hot weather because decomposition is more active, but the question is whether in the cold season there is not a tendency to be less vigilant in supervision and so the sewers become more dangerous to health.

Q.—Are any emanations from sewers imperceptible to the olfactory organ ? *A.*—Certainly.

Q.—And these emanations may be very dangerous ? *A.*—They are.

Q.—They are such as Municipal halalcores could certainly not recognize. The Engineer's people who have charge of the drains, they know nothing about them, they are beyond their ken ? *A.*—Wherever you have sewage, you have smells.

Q.—But are there no emanations from sewers without smell ? *A.*—There are certain gases without smell. I have never known sewage without smell.

Q.—You have said it is the tenacious deposit binding together the detritus that makes the removal of the deposit difficult? *A.*—Yes.

Q.—Is this tenacious deposit the same inside the down-take pipes of houses, which makes them more or less offensive ? *A.*—Yes, in the sewers of Bombay.

Q.—You understand that all my questions refer to Bombay? *A.*—Yes.

Q.—Are the gullies between the houses usually paved with blue stone? *A.*—Generally they are.

Q.—Is the paved surface frequently out of order and does sewage pass down between the stones? *A.*—Yes, there is percolation.

Q.—When it passes down, does it find its way all round, and under the foundations of the houses? *A.*—It may, but not necessarily; it depends upon the amount of sewage there is.

Q.—Supposing there is plenty? *A.*—It depends upon the power of absorption of the soil. It is simply a question of saturation.

Q.—Are the gullies of the different houses laid at different levels? *A.*—Yes.

Q.—Is the slope given to them sufficient? *A.*—The slopes are unequal and insufficient.

Q.—Is not this condition of the gullies objectionable with reference to the preservation of health? *A.*—That aspect is undoubtedly objectionable.

Q.—Should not the gullies be included in house-connections and be laid down on such a principle as would prevent them retaining any liquid that might be poured into them? *A.*—I have always thought so and written so, and ought not only to be laid down but automatically flushed.

Q.—Would you abolish the existing stone pavement in gullies and relay them so as to receive the house sullage into open channels that can be got at, flushed, and even scoured if necessary? *A.*—In the case of houses of the poor.

Q.—Does your experience cause you to know that the present house gullies are a source of disease? *A.*—I think, looking at it from all the scientific information we have, they must be a cause of disease.

Q.—Do you believe that the changes you propose would reduce fevers; of course it would reduce smells, and abolish mosquitoes? *A.*—No; but I think it would invigorate the population and improve their health.

Q.—That comes to the same thing. Are most of the infantile fatal fevers of Bombay caused by impure air in the houses? *A.*—A great many are, and they are much influenced by impure air.

Q.—Does this impure air produce lung complications in the course of fever, and are these complications the immediate cause of death; in 75 per cent of the cases? *A.*—Statistically it is not shown; most cases occur in the crowded districts.

Q.—Are these lung complications the immediate cause of death? When a child gets fever we find bronchites and pneumonia, and these lung complications are the cause of death? *A.*—The immediate cause of death then.

Q.—So you may confine the faults arising from the sewerage to two heads—fevers and diseases of the respiratory organs. What

arrangement of house drainage would you propose for tenement houses with party walls? *A.*—To other heads also. That is, tenement houses having no gullies?

Q.—Yes, for instance, Abdul Rhaman Street? *A.*—I think the safest system is one somewhat like the one embodied in this model. I trust the policy of the Municipality, when the Act has been amended, will be to compel house owners to leave gully spaces.

Q.—When opportunity affords, that will take three thousand years. What you propose will do equally for houses with party walls as for separate houses with sweepers' gullies? *A.*—I would not say so well although it would be safest, but it would do best for houses with gullies.

Q.—But supposing Government put four lines into the Act that no *nahanis* or outlets should be made except at the back of houses? *A.*—The result would be the same; no one would pay any attention to the Act. My unfortunate experience is, that in most cases you cannot get the people to do anything unless they like.

Q.—Is the mortality in the Kamathipura district very high? *A.*—Yes.

Q.—Does it occupy a second or third place in the mortuary returns? *A.*—A very high place.

Q.—Do you know that it has been sewered twice over and that all the expenditure asked for has been willingly granted by the Corporation? *A.*—Yes, to the first part of the question; I don't know with regard to the second. (Laughter.)

Q.—The mortality from fever, respiratory diseases and cholera is always higher than the general average in that district? *A.*—Not with regard to fevers; with regard to respiratory diseases, yes.

Q.—Last week the rate from fever was 16 per 1,000 in that district? *A.*—You cannot take one single week; the period before that it was only 10 per 1,000.

Q.—In your quarterly report you say that Kamathipura is "a poor and crowded population living in a locality once raised from a state of submergence with garbage, and at depths there is still garbage oozing and undecomposed"? *A.*—Yes.

Q.—Do you mean that the district was raised with street sweepings? *A.*—Yes.

Q.—Where did you get this information? *A.*—My information comes from two sources—popular information which I have obtained from people generally, and information contained in the Municipal reports—and also information from personal information and also the state of the foundations of the new Municipal halalcore chawls. If you remember, the foundations had to be carried to a considerable depth in order to get beyond the garbage and refuse.

Q.—Did you consult the Engineer's report on the Kamathipura sewerage works, which that officer published in 1869? *A.*—I have no doubt I have read it.

Q.—And after reading it, you made that statement? *A.*—No, I had not read it before.

Q.—If you did not consult that statement, it was only necessary to take borings. The district was raised with six feet of fresh red earth. The papers are now in the Municipal Office. The Engineer states "a number of the streets have been raised several feet with great advatage both as to the disposal of the rainfall and drainage, and it may be stated that the value of the property in this district has been increased by these works"? *A.*—That may be perfectly true.

Q.—I may also tell you that I was present and saw fresh red earth filled in? *A.*—I am quite willing to have it put to a practical test.

Q.—Was Dr. Hewlett Health Officer at the time when this sewerage was first executed? *A.*—No, there was no Health Officer; Mr. Forjett was Commissioner when the locality was filled with garbage.

Q.—Do you know he was always opposed to the raising of land with sweepings? Kamathipura was never filled in with *kutchra* except that bit at the back? *A.*—I have seen the foundation taken out when the new Milch Cattle was built; beneath was garbage or *kutchra*.

Q.—Earth was put on top of the *kutchra*? *A.*—To what depth?

Q.—You ought to be able to tell us that from your observations? *A.*—Portions of the Fort have also been reclaimed in the same fashion, the students' quarters at the Elphinstone College, for instance, are on ground so reclaimed around.

Q.—Supposing there was 6 feet depth of fresh red earth on top, would not that minimise the nuisance and prevent the *kutchra* decomposing? *A.*—Yes; but it would make the *kutchra* more dangerous.

Q.—Then, you did not know that until I informed you? *A.*—I knew it perfectly well. It does not alter the fact in the least from my point of view.

Q.—But do you know that Dr. Hewlett was always opposed to raising land with sweepings and he declined to have one square yard of *kutchra* whilst he was Health Officer? *A.*—That is subject to correction.

Q.—Were you present when the pipe drains in the various side streets of Kamathipura were dug out? *A.*—No, but I saw the pipes and the excavations and have written on the subject. A large number of the drains were not used for sewage, but for rain water.

Q.—Were these drains laid on concrete beds? *A.*—No.

Q.—Then they are laid upon garbage? *A.*—No, I say there is *kutchra* deep down and earth above.

Q.—But you did not say anything about the earth in your report? *A.*—No.

Q.—But they were matters within the knowledge of living persons. Then you don't know whether the pipes are laid on concrete or loose earth? *A.*—Generally they are not on concrete, but on earth.

Q.—Is there a single one? *A.*—I cannot say at the moment how many.

Q.—Are there thousands of tons of soil round the tenement houses in Bombay and in and under the gullies saturated with sewage? *A.*—I cannot admit that there is except from saturation.

Q.—Are the surroundings of the house saturated with sewage? *A.*—Not necessarily; only where you have imperfect gullies, there is a certain amount of saturation.

Q.—You know it by its being a black stuff? *A.*—There is of course moisture in it.

Q.—When you take up the gully stones you see a lot of black stuff? *A.*—In some places you see it.

Q.—If you saw it you would know it was done by sewage? *A.*—Certainly, something wet.

Q.—Should it be removed and replaced by sweet earth, for, where you find it, it is certainly poisoned earth? *A.*—That, of course, would depend on circumstances; in some cases it would be better to remove it and in others to put fresh earth on it and deodorize it.

Q.—Do you know that whenever a European has tried to live in these Municipal Offices he has been attacked with bad hepatitis? *A.*—I have heard something about it, but my recollection is rather indistinct.

Q.—That was due to the insanitary house-connections and drains in these premises? *A.*—I can only give my own experience, and we have certainly had foul smells in this office and have had to remove the siphon and pipe in my office and put in a new one. The period Dr. Blaney speaks of is a great many years ago, and since that period the house-connections have been disconnected from the sewers.

The President: Will you please show Dr. Weir the plan prepared by Mr. Smith as put in with reference to the modifications of the house-connection system, so that he can give us his opinion about it? *A.*—I would rather you allowed me to reply on a subsequent date.

Q.—I think that is only fair. The *Lancet* of the 28th May last says: "There is no doubt that there is a vast amount of carelessness in the construction of house drainage in many districts and no sufficient precautions are taken to ensure that drains are properly laid, efficiently jointed, or that they are tested with water before being passed by the local authority. The result is that these defects are only discovered after some cases of illness have occurred." Is there anything of that kind occurring in the sewerage of Bombay; if it can occur in these large English cities, it is likely to occur here? *A.*—The house-connections referred to are made by the house-owners themselves.

Q.—Is there any of this carelessness going on in Bombay? *A.*—I don't think so, so far as Municipal work.

Q.—Then we behave much better than the people in England. I think Mr. Baldwin Latham bore out that. You don't know if the Corporation have tried to effect economy in sewerage? *A.*—I don't know.

Examination of Mr. Weir by Mr. Pherozesha M. Mehta.

Q.—In your report of the first quarter of this year you say "In my opinion all attention should be fixed on the construction of drains, and, as I have before urged, the construction of all house-connections should be abandoned." When did you urge that? *A.*—I urged it about two years ago.

Q.—I suppose to the Commissioner? *A.*—No; but I have written reports to the Commissioner pointing out defects in the house-connections.

Q.—You have? *A.*—Yes.

Q.—In the same report you say "Moreover I do not think the system of house-connections is suitable for dwellings in which each room is let out to tenants." What was your reason for giving that opinion? *A.*—You must consider the necessities of the people who live in tenements. Each room has from 4 to 5 people and each person has four or five cooking pots and you have a *moree* in which they bathe during the day and during the night use for urinating, and in which you often find two stones placed for the use of children to be used as a privy at night. The cooking pots have to be cleaned with sand, *muttee* or ashes, and grass or fibre when they come home at night; there has been a great change in the life of the poorer people of Bombay owing to the mills. The women now go to work as well as the men, and the result is that they have to cook their food when they return home and have no time to go outside and carry away the earth, sand and other matter used for cleaning the pots in a basket for perhaps fifty yards. Their object is to cook their food quickly, and consequently they throw everything into the *moree*. Another thing is the cow-dunging of floors. The cow-dung is washed over afterwards with water and swept into the down-take pipe. It forms a most tenacious mass and with the addition of night-soil forms a mould. Then there are the Hindus who eat from leaves which are often put into the *morees* and either obstruct the pipe or trap. If we were in the same position, I daresay we should do exactly the same.

Q.—Does this apply to by far the largest number of houses where there are house-connections? *A.*—To a very large number and to all the poor classes.

Q.—Some of the habits you have described will apply to the middle classes to a certain extent? *A.*—Certainly, amongst Hindus, but not to the same extent. The poorer classes of Christians, as I have seen opposite the Municipal Offices, are just the same and equally careless with regard to *morees* and pipes.

Q.—Have you seen the notice produced to-day by Mr. Smith? Are they of much use? *A.*—I hope they will be, but my unfortunate experience is that they are not of much use.

The Commissioner: They were issued at the request of the Corporation I think. (Laughter.)

Mr. Pherozeshah M. Mehta: Even with notices do you think the habits of the people can be given up considering their circumstances? *A.*—I do not think they are habits at all; they are necessities, and I should do exactly the same in the same position of life.

Q.— No amount of notifying can make them give them up? *A.*—The poor classes of India are not a bit worse than they are in Great Britain.

Q.—So you say the habits are a necessity of the conditions of the people? *A.*—Yes.

Q.—Taking these habits of the people and the necessities into account, what has been the general effect of the house-connections in the districts in which they have been made, from a sanitary point of view? *A.*—Statistically the facts are not displayed in any way, but I think that in the districts in which they have been carried out there is a decrease of mortality. But the statistical results must be received with caution. In some districts, Dhobie Talao for instance, I think house-connections are undoubtedly a great improvement, but in other districts I am doubtful as to their effecting any improvement.

Q.—You say you are doubtful as to their effecting any improvement. Do you think they have been injurious? *A.*—In the case of house-connections which are or may be often obstructed, they are much more dangerous than the open gullies; the difference is this, that in a house such as represented by the old model, you have the sewage directly underneath the rooms, but in the case of open gullies you have it outside.

Q.—You say in your last report that you complain of the delay of the removal of obstructions and the nuisance arising from them. Are there many cases of such obstruction and delay? *A.*—Many; I did not write in that report exactly what I intended; what I wished to say was that the system caused delay and I did not mean to say that the Drainage Department was more dilatory than the Health Department would have been under the same circumstances.

Q.—Nor did I read it in that way. I understood that the delay was in consequence of the system and that it was almost a necessary delay? *A.*—Yes, that is so; the delay may be one week, two weeks, or even more.

Q.—What is the state of the people living in the houses in the meantime? *A.*—It is a lamentable state of nuisance. There was one case in the Fort which lasted several weeks.

Mr. Blaney: So it did at my house. I hung by my fever for three weeks.

Mr. Pherozeshah M. Mehta: Do the Drainage Department look to the people themselves to remove the nuisance? *A.*—Yes.

Q.—How do they expect them to do it; if a siphon is obstructed they must bring a plumber and have the pipe removed and cleaned. That is the only way of doing it? *A.*—It is extremely difficult when one puts one's self in the position of a house holder. Siphons are not easily cleaned.

Q.—It would necessitate removing the pipe? *A.*—Not in every case.

Q.—I should like to understand how it could be done otherwise? *A.*—That is a question rather for the Engineer. It has occurred to me as an idea that the future system would be to have a moveable pipe inside like a trochar having one pipe inside the other.

Q.—So far as you have observed, the Drainage Department look to the people. From what do you say that? *A.*—From what I have written and seen officially.

Q.—And the replies received from them? *A.*—Yes.

Q.—Then you think the house-connections are unsuited to the necessary conditions of life of the poor classes? *A.*—That is my opinion.

Examination of Surgeon-Major Weir by Mr. Bhalchandra K. Bhatawadekar.

Q.—Have you been consulted as to the suitability of the house-connections, to the habits and customs of the people? *A.*—I have no recollection of that. I have recommended house-connections generally, but I have not been consulted with regard to the details of the system.

Q.—What is your opinion of the present system as a sanitary measure and its effects on public health? *A.*—I think in regard to buildings, such as the Secretariat and the better class of houses, the system answers well, but with regard to the poorer classes who live in tenements the system is not suitable, and you cannot expect from it any great sanitary advantage.

Q.—What are its sanitary effects on public health? *A.*—It would be difficult to estimate them.

Q.—Have you been able to compare the mortality returns of the years previous to the putting in of the house-connections with those of the years after their introduction; and what are your conclusions? *A.*—I think the returns do not show any appreciable effect either one way or the other. The returns must be accepted with a great deal of care, for it does not follow that, because such returns do not show that there has been improvement, such has not been the case, or, because an increase of sickness is not shown, that there has been no such increase. You must judge by experience after weighing a number of conditions. If, however, there is a nuisance, it is likely to be an injury more or less to health.

Q.—If there are any smells emanating from the *morees* or *nahanis*, are such smells necessarily due to sewer gas? *A.*—Not necessarily. Still, of course, they are exactly the same.

Q.—Identical? *A.*—They both come from organic matter, and it makes no difference whether it is an enclosure which you call a "trap" or a sewer.

Q.—To what do you attribute the abominable smell emanating from the down-take pipe through the *morees* into the houses? *A.*—That is a question which I have been investigating for years very carefully. We have had smells in the Health Department Office and in this office also. The foul air coming from *morees* is exactly the same as you feel coming from traps in the street. In *morees* it arises from a complication of causes coming from the pipe and siphon, and where you have a heated atmosphere it may be that sewer air is attracted through the siphon into the room.

Q.—Do you think it is dangerous to human life? *A.*—It is certainly unfavourable.

Q.—Are the smells from down-take pipes more troublesome in the hot and wet weather than in the cold? *A.*—They are more perceptible.

Q.—If a down-take pipe is choked for several days so as not to allow the down course of sullage, is there any chance of organic matter giving off emanations of sewer gas? *A.*—It is just the same as a sewer.

Q.—So that if it will take 4, 5, or 8 days for the pipe to be cleaned, the inmates of the house are always in danger? *A.*—Certainly.

Q.—Do you think that the siphons serve their purpose properly? *A.*—I have answered that question. In regard to these and other matters of a scientific nature, you must accept scientific dogmas as being liable to a series of exceptions which affect their value. I will take, for instance, the small fact laid down by sanitary books which says that you must not use lime in floors on which urine may be passed. That is perfectly true, but it is subject to certain practical conditions in India owing to the large use of water which does not prevent its use and prevents urine acting on the lime. They are all subject to certain conditions which qualify them. I will give you a practical proof in the case of the old *Bombay Gazette* Office. There, in the connections they had not only siphons but disconnecting chambers, and there was a space of about a foot between the down-take pipes and the drains; yet at night when the machinery was working, sewer gas was drawn up the pipes across the open spaces.

Mr. Blaney: Yes, you are quite right, the girls there were my patients.

Mr. Bhalchandra K. Bhatawadekar: Do you believe in the efficacy of the ventilating pipes? *A.*—In cases of buildings like the Secretariat, siphons are useful.

Q.—But as to my last question, Doctor Weir? *A.*—I have not the confidence in the efficiency of small ventilating pipes that some authorities have. They give safety under some conditions and in places where they cannot be injured or tampered with.

Q.—Do you not think that they are a positive nuisance to houses in their vicinity? *A.*—In some cases they are.

Q.—Do they give rise to fevers? *A.*—If there is a vent and leakage, undoubtedly they will.

Q.—Does sewerage decompose slower in the open than in the closed drains? *A.*—In a closed drain.

Q.—Do you believe that noxious gases from open gullies are more dangerous in a concentrated dose from *nahanis*? *A.*—I think not.

Q.—A concentrated gas finding its way into *morees* is more dangerous? *A.*—Yes, more dangerous.

Q.—You have said in your report and in answer to Mr. Blaney and Mr. P. Mehta that the house-connections are not suited to the chawls and the crowded localities of the city; do you think they are applicable to houses occupied by the middle classes—people residing in houses not chawls? *A.*—I think there would have to be some selection; not to all.

Q.—What modification would you suggest? *A.*—Apart from the poorer classes, I think as the down-take pipes become old they corrode very rapidly. I think it would be better to have larger pipes and larger traps.

Q.—Larger traps as well? *A.*—I said yes.

Mr. Nanabhai Katrak: How soon do they corrode? *A.*—Very rapidly, our night-soil carts corrode very rapidly.

Q.—Mr. Smith told us that it would take 20 or 30 years? *A.*—It depends upon whether they are used for night-soil or not.

Mr. Bhalchandra K. Bhatawadekar to Mr. Weir: You recommend this model (red) for adoption? *A.*—I think an idea of that kind is suitable for chawls.

Q.—Do you think a modification of it would be suited for houses inhabited by few people. *A.*—Discretion is necessary in some cases; it would be better than the other.

Q.—Are you aware of the general complaint that halalcores empty their baskets of night-soil into gully traps? *A.*—I have made a note of that. I think there is very great misapprehension in regard to this matter; this is a point of practical importance; in the first place the traps in connection with privies are so seldom blocked that it may be said they are never blocked. I don't think I have seen half a dozen in my experience.

Q.—Then there is no objection to its being done. *A.*—O, yes; I object to it in every possible way.

Q.—I asked were you aware of its being done? *A.*—Undoubtedly.

Q.—Are you satisfied that the complaint is well founded? *A.*—It is well founded, in so far as the halalcores wash their baskets over the gully traps.

Q.—Then they don't empty them into the gully traps? *A.*—Very seldom. What people object to is that the men instead of going to a distance go to a particular house to wash their baskets and of course no one likes them in their vicinity.

Q.—If instances were brought to your notice, would you be convinced? *A.*—I am quite convinced; I have seen it, but it is seldom.

Examination of Surgeon-Major Weir by Mr. Cowasji Pestonji.

Q.—What is the object of house-connections? *A.*—To remove liquid refuse.

Q.—Scientifically? *A.*—To remove liquid refuse innocuously.

Q.—And not to let noxious gases permeate the houses? *A.*—Yes.

Q.—What are the requirements of an efficient drainage? *A.*—The requirements are to remove sewage innocuously without injury and nuisance.

Q.—Do you believe in the efficacy of the water seal? *A.*—Under certain conditions.

Q.—What are the objections, that is, under what circumstances do they prove inefficacious? *A.*—I think I have answered that.

Q.—Under what circumstances is the seal likely to be broken, and how is the breakage to be remedied? *A.*—Of course the immediate way is to put fresh water into it, but that is impracticable; the scientific means are by using ventilating shafts not merely to ventilate but to prevent the siphon being sucked, as you will see by the white model that a flow of water from the lower siphon is liable to draw the upper one.

Q.—So a ventilator remedies the breakage to a certain extent? *A.*—Yes.

Q.—Under certain circumstances will sewer gas bubble through a water seal and enter a house through the down-take pipe? *A.*—Certainly, that is prevented to a certain extent by the ventilators attached to the drains and the open space between the down-take pipe and the siphon. Ventilation is an essential portion of drainage so long as drainage is drainage.

Q.—Considering all other things in connection with a house-connection normal, don't you think a water seal is the best disconnection? *A.*—It is a disconnection, but not so safe as open space.

Q.—Don't you think that organic matter in the shape of rice, fish, flesh, washings, etc., passed into the gully traps through the *morees*, is prejudicial to health? *A.*—I have answered that.

Q.—If the ends of *moree* pipes be provided with flap valves, will they not prevent the gases from entering into houses? *A.*—So long as they acted they would prevent the gas to some extent, but I have no faith in anything which is not of the simplest kind.

Q.—Do you believe that gases can enter a pipe provided with a valve while the water is running out of it with ordinary force? *A.*—I think so.

Q.—It is a known fact that the gully traps get choked up, will not cleaning them oftener than is done at present prevent it? *A.*—They are now being cleaned as often as they can be.

Q.—Can you tell us if the mortality from fever and diarrhœa in the districts which have been house-drained has been less than what it was than when there were no house drains? *A.*—I have answered that.

Q.—Don't you think that besides the climatic and sub-soil influences sewer gas is a factor of the causation of fevers and diarrhœa that prevail in Bombay at present? *A.*—I would answer that, wherever there is sewer gas, it has a debilitating effect on the people, but I think the fever prevailing at present is seasonal.

Q.—Sewer gas has nothing to do with it? *A.*—Only in so far that it lessens the chances of recovery; of course, if you have obstructed pipes and obstructed *nahanis*, you will not only have diarrhœa, but you may have poisoning.

The Committee then adjourned its sitting until Tuesday, August the 9th.

BOMBAY, *9th August* 1892.

AT the meeting of the Committee held this day, there were present:—

Javerilal U. Yajnik, Esq., President; Ardasir D. Mody, Esq.; Brigade-Surgeon-Lieut.-Col. S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; Dominick A. D'Monte, Esq., M.D.; Fardunji N. Bisni, Esq.; Framji D. Divecha, Esq.; Kaikhosro N. Kabraji, Esq.; Meherjibhai R. Setna, Esq.; Nanabhai N. Katrak, Esq.; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissioner; the Acting Executive Engineer; the Health Officer; and the Secretary.

The signing of the minutes of the meeting held on the 5th instant was postponed.

Mr. Nanabhai Katrak: With your permission, Mr. Chairman, I would draw your attention to a slight omission on page 58 of the minutes. A question of mine, after "They allow water to percolate and absorb?" the next question should be "What do you think of the model prepared by you?" and the answer "Well, it is going back to the old condition of things."

It was agreed that this correction should appear on the minutes of this day's meeting.

Re-examination of Surgeon-Major Weir, Health Officer, by Mr. Nanabhai Katrak.

Dr. Weir, you say that there are three advantages in this model (red) over the old one? *A.*—Yes.

Q.—Will you not add one more, that is, you require no deep digging to lay house drain pipes and consequently there is no injury to foundations? *A.*—Yes, that is a financial advantage.

Q.—With respect to your remarks of last Friday, you wanted only an intercepting catch-pit and no siphon? *A.*—Yes.

Q.—You would do away with the grating near the gully traps? *A.*—I should prefer to have a grating, but there are practical objections to a grating which Mr. Smith pointed out, but on the other hand there are great practical advantages to be had from a grating.

Q.—Then you do allow gratings to be there? *A.*—With the form I had in my mind, it would not be at the upper end but at the outflow end.

Q.—Beyond the catch-pit, at the gully trap? You believe it is necessary? *A.*—I think it is an advantage to have one there, so as to prevent obstruction.

Q.—You have it in your model? *A.*—I only say it is an advantage.

Q.—Will catch-pits prevent floating substances like pieces of wood, sticks and straw; do you think that floating substance will be done away with? *A.*—I propose to have the grating on the other side.

Q.—This grating is necessary? *A.*—Yes, it is an advantage.

Q.—You have said you advise this plan for chawls and tenement houses, but not universally; where is the harm if it is used wherever practicable? *A.*—My recommendation practically comes to that.

Q.—If it is possible to carry it out why not carry it out universally? *A.*—I replied to Mr. Bhalchandra that discretion ought to be used in regard to the houses of the better class of people.

Q.—What advantage has the old system over this in the case of houses of the better class? *A.*—It has an advantage in such places as the Elphinstone College for instance. Assuming that the system is working perfectly, you have no deposit of matter in the gullies which you would have with the system shown in this model.

Q.—But the down-take pipes will smell all the same whether they are in rich or poor houses? *A.*—There is a difference in regard to the use of the pipes, the quantity of water poured down them and the disinfection.

Q.—There is a danger in the old system under certain circumstances, when gases get into the rooms? *A.*—Certainly.

Q.—So practically on hygenic principles, it is not so advisable as your plan. We may hold to the popular fashion of having such a thing as this, but on sanitary grounds it has no advantage? *A.*—In the case of this model (my proposal) you have what may be called a greater nuisance to the eye than to the nose, and in the other case there is little nuisance to the eye, but a nuisance to the nose.

Q.—But there is a sanitary advantage over the old system? *A.*—I think there is a sanitary advantage. I think the nuisances which have been felt were generally nuisances from the siphons.

Q.—We know your opinion about the siphons; it is emphatic and positive, but I cannot understand why you recommend it in a building like this (Municipal Offices)? *A.*—I recommend it because I assume it will be filled with clean water.

Q.—But it may be some charged with sewer gas? *A.*—If it has been charged, it is in that proportion a protection to the house. My reason for recommending siphons in the case of buildings like that opposite is on account of the protection siphons filled with clean water give against gases.

Q.—You do believe that water in siphons does interrupt gases? *A.*—Assuming that it is fairly clean, there is no question about it whatever.

Q.—In some localities wall siphons are done away with, do you believe that, by doing away with siphons, smells or gases pass more easily into the rooms than when the siphons were there? *A.*—I don't think so. I am speaking of crowded houses. I don't think the protection is less, but the nuisance is less.

Q.—About siphons what is the general opinion in England? *A.*—When I went home in 1890, I was very much astonished at seeing the defective sanitary condition of London. A great many of my impressions about the sanitation of England disappeared, for I found smells everywhere.

Q.—Are the Sanitary Engineers still in favour of siphons? *A.*—Yes. Judging from what I saw in 1890, my opinion of European authorities has been considerably shaken.

Q.—Then opinion is divided? *A.*—In England it is in favour of siphons as it is in favour of everything that is complicated.

Q.—Do leaves, ashes and straw play any part in keeping vessels clean in England? *A.*—Not as a rule.

Q.—Then, if the opinion is unanimous there in favour of siphons, it cannot apply here? *A.*—They have appliances for cleaning, but throw the refuse matter into different places to what our *morees* are.

Q.—If the opinion in England was in favour of siphons, it would not hold here? *A.*—Yes.

Q.—You have said that when the rooms are heated gases from outside can pass in? *A.*—Yes.

Q.—And come from down-take pipes as well as the house drain pipes? *A.*—Yes.

Q.—Is it more likely to take place during day or night? *A.*—Night.

Q.—Because the temperature is higher in a room during night than day? *A.*—Yes, it may be.

Q.—But in some houses cooking goes on during the day in the same room as people sleep at night? *A.*—Of course you may produce the same conditions artificially.

Q.—And during night human vitality is at its lowest? *A.*—That is a physiological question upon which I do not give an opinion, but that is generally accepted.

Q.—Hence the sewer gas gets in during the night and stays there for 12 hours? *A.*—Assuming that sewer gas enters a room, you cannot speak of a gas as staying.

Q.—Then, it is likely that they do pass in at night when human vitality is at its lowest? *A.*—That may be the case during the night.

Q.—It is admitted that down-take pipes get foul and continuously give out stench; the same must be the case with the house drain pipes? *A.*—In a lesser degree.

Q.—Less foul? *A.*—Yes.

Q.—You know that some quantity of night-soil is passed into the house drain? *A.*—Yes.

Q.—Can you give me a rough percentage of what passes into the house drain? *A.*—Two per cent. probably.

Q.—Do you not think that this little quantity would make the house drain pipes fouler than the down-take pipes? *A.*—No, because we have a practical proof in the fact that the traps connected with privies are never obstructed.

Q.—But it must foul the gully pipe? *A.*—I don't think it is very likely, because it does not adhere to the trap.

Q.—Not the trap but the house drain? *A.*—If it does not adhere to the trap, it is not likely to do so to any other portion.

Q.—Then, you don't believe that there is any truth in the statement made by some people that they get the smell of night-soil in their *nahanis*? *A.*—They feel a bad smell which, they think, is night-soil.

Q.—Then, you don't think it can pass from the house drain pipe through the down-take pipe into the *nahanis*? I ask this question with reference to the one I asked the Engineer, Mr. Smith. *A.*—It puts the question on a theoretical basis. There are a number of matters which smell as night-soil; there is a small cellular plant in the Babula Tank which grows very rapidly and when it decomposes smells exactly like night-soil. If you put it on a theoretical basis, that night-soil does adhere to the pipe, then you might have a smell carried as you state, but I do not think that it does now generally adhere to the pipe.

Q.—You say that the smell from a down-take pipe is due to a sticky slimy substance which adheres to the pipe and which you cannot remove by flushing? *A.*—Yes.

Q.—Is there any objection on a sanitary ground if down-take pipes were done away with and sullage allowed to fall into the gullies? *A.*—The only objection is that the water would splash on to the sides of the houses and wet.

Q.—Would that be worse than the smell from the down-take pipes? *A.*—It would tend to make the house unwholesome, and it is impossible to have houses with perfectly impervious exteriors and foundations.

Q.—Then, on sanitary grounds, it is objectionable. Do you think iron pipes smell more than tile or chunam pipes? *A.*—Yes; I think iron pipes smell more.

Q.—You advise the adoption of pipes of 4 inches in diameter; do you think that with these pipes there would be fewer chokes? *A.*—I think so.

Q.—Do you believe that these pipes will allow all solids to pass, which cause chokes? *A.*—Yes, most.

Q.—Do you know that chokes have occurred with 4-inch pipes? *A.*—Yes, and with larger pipes.

Q.—Do you agree with the opinion, that the larger the pipe the larger is the surface to be fouled; that is the opinion of the Engineer who says that there would be an increased nuisance from larger pipes? *A.*—That is so.

Q.—Do you believe that the advantage of 4-inch pipes will outweigh the objections of the greater surface being fouled? *A.*—Yes.

Q.—Don't you think for the liquid portion of the sullage 2½-inch pipes are sufficient? *A.*—Of course that comes to the real practical difficulty in regard to the necessities of the people.

Q.—But we will deal merely with the liquid portion? *A.*—Then 2½-inch pipes are enough if pipes are used not as they are used now; but for the solids you must have a larger pipe.

Q.—You still believe that 4-inch pipes will allow the solids to pass but no gas? *A.*—4-inch pipes may become obstructed. The pipes will not prevent gases passing.

Q.—Supposing we use 8-inch pipes. The advantage I claim for them is that they can be cleaned from above with a broom or brush or from below by the halalcores; is a pipe of this size feasible? *A.*—I don't think a larger pipe than 4 inches is feasible,

and the only advantage of a 4-inch pipe is that the chances of obstruction by solids are less.

Q.—You don't believe that it is feasible on sanitary grounds; if it were so, it would be a great advantage? *A.*—There are so many disadvantages connected with such a large pipe that it is not to be advised.

Q.—But there would be no possibility of chokes? *A.*—I don't think you could clean an 8-inch pipe easier than a 6-inch pipe. I think the object to be looked to in a pipe is that it should be large enough for most solid matter to pass and at the same time not too large to leave an exposed surface.

Q.—Then one thing is certain, that the down-take pipes are a nuisance and you cannot flush and clean them? *A.*—Yes; you can flush, but not completely clean them.

Q.—And as you say that 6 or 8 inch pipes are not feasible, don't you think that they should be so constructed that they might be periodically disconnected and cleaned? *A.*—If that could be done, it would be a great advantage.

Q.—Supposing it is not practicable, what do you suggest? This is a practical question, and there must be something done to the down-take pipes because they are the chief agents of nuisance. *A.*—I say at once I am not prepared at present to suggest anything practical.

Q.—Then, we will hold over the question? *A.*—I don't think I ever shall be.

Brigade-Surgeon-Lieut.-Col. Banks: That is an engineering question.

Surgeon-Major Weir: If I had such an idea, I should at once take out a patent for it; I have said that it was always in my mind that there should be two pipes one inside the other which would admit of their being easily cleaned.

Mr. Nanabhai Katrak: Don't you think one of the three suggestions I have made might be considered? The object of the drainage of any locality is to prevent waste water from getting into the land and making it damp and unwholesome, and giving off foul gases. *A.*—Yes.

Q.—The object of house-connections is the same? *A.*—Yes.

Q.—Do you think that house-connections, wherever they are made, carry out their object? *A.*—Except in regard to obstructions, they do carry out their object.

Q.—They produce a great deal of dampness around the house and smell? *A.*—In regard to smell, they do.

Q.—It is admitted by everybody that the water overflowing the pipes falls on the gullies which are not watertight and allows the water to percolate and produce a certain amount of dampness; do you believe that that amount of water is sufficient to produce such dampness as to affect the health of the public? *A.*—I think I have answered that question.

Mr. Blaney: You answered it satisfactorily so far as I am concerned.

Mr. Nanabhai Katrak: You do believe that it is injury to health? *A.*—Yes when it occurs.

Mr. Blaney: We went a great deal further. He said that the whole of the damp soil should be taken out and filled in with fresh earth.

Mr. Nanabhai Katrak: What effects on the public health have led you to say that it does injuriously affect the health of the public? *A.*—The general statistics and my experience show that dampness affects the public health and influences the incidence of cholera, apart from experience in other countries.

Q.—What diseases do you associate with dampness? *A.*—Fevers, diseases of the respiratory and digestive systems and phthisis; and cholera is greatly influenced.

Q.—Phthisis is generally taken as the standard on which to calculate the effects of a sanitary system? *A.*—It depends, certain conditions are represented in that type of disease.

Q.—Have you any figures to show that phthisis has increased or decreased after the construction of house-connections? *A.*—As I have explained, by figures it is impossible to show the effects one way or the other.

Q.—What is your impression? *A.*—My impression is that house-connections have had very little effect either way.

Q.—Then, it has remained stationary? *A.*—No, my impression is that house-connections have had little effect upon the health of the localities in which they are.

Q.—But phthisis has remained stationary? *A.*—No. There are so many other factors in this city influencing the mortality that you must be careful before ascribing any increase or decrease to any particular cause; in Kamathipura there has been a decrease of phthisis, but I should hesitate to ascribe it to the fact that house-connections have been made there.

Q.—You are the Health Officer, and the public expect you to give them information on subjects like this. If you say you cannot make anything out of it, we are helpless? *A.*—What I mean is this, that at present the system of drainage has not been completed according to the registration districts and therefore it is impossible to form an exact estimate or opinion as to what the effect has been on public health.

Q.—Your impression is that it has had little or no effect on the public health? *A.*—Yes, with regard to phthisis, but generally favourable on the general health.

Q.—Supposing that by following the advice given by Mr. Blaney . . .

Mr. Blaney: I did not give any advice, I merely asked a question.

Mr. Nanabhai Katrak: If we filled in these places, where there has been a leakage, with sweet earth, disease would be checked? *A.*—That is one important form of improvement. There are numbers of others. You must have better ventilation from the outside, and more light and space inside houses.

Q.—But what I have mentioned would be an important factor? *A.*—Certainly.

Q.—Has it come to your knowledge that in some localities since house-connections have been made, smells have appeared where none before existed? *A.*—I have not heard that such is the case; it has not come to my knowledge.

Q.—The Engineer says so? *A.*—That is a question which I cannot answer.

Q.—Do you believe that smells have increased where they formerly existed? *A.*—I can hardly answer that unless it is put in a definite form. Take, for instance, the Queen's Road. Formerly there were no sewers there, but there are now; and there are manholes to the sewers, and smells come through them which did not exist before.

Q.—I talk of house-connections; you are not prepared to answer the question? *A.*—I feel a difficulty.

Q.—You have said that the smells in down-take pipes are identical with sewer gas and that both affect health injuriously? *A.*—Yes.

Q.—Do you think that the house-connections directly produce fevers? *A.*—No.

Q.—Are you aware that a large majority of medical men in Bombay are of opinion that the fever raging in Bombay for some years is due to the direct action of sewer gas? It is the opinion of some medical men, and you are also aware that the public also hold some such view? *A.*—The public have an impression of that kind. I do not think fever is prevalent through the influence of sewer gases or that fever can be said to be "raging."

Q.—Are you aware that the Bombay University hold such an opinion, and that they offered a prize for the subject of fevers in connection with the drainage system? *A.*—I cannot answer that.

The Commissioner: Universities occasionally do foolish things.

Mr. Nanabhai N. Katrak: Do you agree that the character of fever is changed of late and that it is not subject to the treatment formerly successful, and now takes more of a specific fever. That is the opinion of many medical men here? *A.*—To a great extent, so far as I have been able to form an opinion from medical men. I think it may also be due to the adulteration of drugs in Bombay. Some time ago I had to have an operation performed on myself and I had a 30 per cent. solution of cocaine applied to me, and, to the great astonishment of my medical friend, it did not act. I think quinine is equally adulterated. There is no law against adulteration.

Q.—But it takes the form of a specific fever; drugs would not produce that? *A.*—According to some medical men fever has changed its type. There is a conflict of opinion.

Q.—That is what I wanted; nothing more; and it is attributed to poisoning by sewer gas? *A.*—Some people attribute it to that.

Q.—Do you know that ague has become less common than some years ago? *A.*—I have heard so, but statistics do not show it.

Q.—What is your impression? *A.*—My impression is formed on figures, and I must say that ague has not decreased, so far as the whole city.

Q.—Well, my impression is that ague is less ; if not, all our money spent on sanitation has been thrown away? *A.*—There has been a great change in the city, the population has occupied and is occupying valleys which were once swamps, and it is to be remembered that only a small portion of the Island of Bombay has been drained.

Q.—Would you not expect after improving the drainage to see fever less common? *A.*—I do not think that Bombay, compared with other places in India equally favoured in regard to climate and administration, is in an unfavourable state or that there is any reason to suppose that fever fatality is higher in Bombay.

Q.—But about ague, your impression does not lead you to say it has decreased? *A.*—Well, my impression is that ague is not less so far as the total mortality.

Q.—Otherwise all our money must have been thrown away? *A.*—There has been a great change in the city ; the population has occupied valleys which were swamps, and it is to be remembered that only a small portion of the Island of Bombay has been drained.

Q.—But much has been raised? *A.*—Only a small portion has been raised.

Q.—Do you think that if we can prevent foul smells from sewers and prevent sewer gas getting into the houses, we can reduce the fever and consequently the mortality of the city to a great extent? *A.*—It would improve the health of the town.

Q.—Cases of fever take about one-third of the victims of the city? *A.*—Yes.

Q.—Coming to a practical locality, what have been the effects of the house-connections in the Fort? Have you formed any idea? *A.*—The Fort has been so recently drained that I don't think I can give an opinion. I may say that in the Market locality there has been a considerable improvement, but in the Fort North, I find that the mortality last year was slightly higher while in the Fort South it was less.

Q.—The house-connections were made only three or four years ago? *A.*—Recently made, but not completely. But in the South Fort there has been a decrease.

Q.—What is the conclusion you come to? *A.*—My rough impression is this, that the drainage has done by better channels what the old drainage did by bad channels. It has removed water from the soil and that must have a favourable effect on the public health.

Q.—In the Fort? *A.*—Yes, and every part of the city.

Q.—In the Fort we have still the old masonry drains under the ground floor? *A.*—Yes.

Q.—And my question was directed to you under cases like this. Is it advisable to join these old masonry drains with the pipe sewers? *A.*—Unless you demolish the house and put the drains outside, I don't see how you can help it.

Q.—The Engineer says he has something like a scheme for the drainage of the Fort. Have you made any report about it? *A.*—No, I have frequently drawn attention to the drains in the houses.

Q.—Do you not think that in the interests of public health the Drainage Department should be under the Health Department? *A.*—In some ways perhaps it would be better to have the cleaning done by the Health Department as they are directly responsible and condemned for nuisances, but on the other hand it is probably better to have it done by the Drainage Department.

Q.—But should not the whole department be under the Health Department instead of the Engineering? *A.*—There are advantages and disadvantages. So far as the public health is concerned, it is perhaps more likely to be served by having drains cleaned by the Health Department, but there are advantages from having it under the Engineer.

Q.—I suppose the Health Department look at a nuisance from a different point of view to the Engineering Department. Don't you think it would be better to have medical men attached to the Drainage Department? *A.*—Yes. I look at nuisances and nothing ever comes of my looking from looking. I act Departmentally and through the Law (laughter); unless the medical men, including myself, did something practical, and that they can only do through law, to remove nuisances, they would not have the slightest effect.

Q.—You say the Engineers look to the owners to remove nuisances? *A.*—Yes. If we were responsible, we might do as the Engineering Department does.

Mr. Nanabhai Katrak: Oh, that alters the whole case.

Mr. Ardasir D. Mody: Do you know of an instance in a street in which a pipe sewer has been closed for two or three days? *A.*—I have known cases of connections between gullies and street sewers being blocked for much more than two or three days.

Q.—How do the halalcores of the Drainage Department do their work in regard to the cleaning of house-connections? *A.*—They are at work now very regularly, but work under great difficulties.

Q.—How long have they been working well? *A.*—I have noticed a great improvement during the last two or three months.

Q.—Have you had to report them for neglect of duty lately? *A.*—No.

Q.—Have the Health Department Inspectors ever had to report them? *A.*—No, I have no recollection. They have reported obstructions.

Q.—Is there any test for the detection of sewer gases? *A.*—There are tests.

Q.—If you applied these tests, could you say there was or was not an escape of gas from the sewer to the house-connection? *A.*—You can tell it at the different orifices.

Q.—Have you tested? *A.*—Yes.

Q.—Did you find it? *A.*—Sometimes I found sewer gases, and sometimes I did not.

Q.—Have you tested pipes? *A.*—I have tested manholes and traps.

Q.—Was there any escape? *A.*—I have sometimes found a current of gas and sometimes not.

Q.—When you have found gas, then there is an escape of sewer gas into the house-connections through the gully traps? *A.*—Yes.

Q.—Although it is not choked? *A.*—Yes.

Q.—Under what conditions would you find that state of things? *A.*—Where a trap was exposed to the sun, you would be very likely to find it, or it might depend upon pressure in the sewer or attraction towards a heated building.

Q.—Do you think that when there is much pressure in the sewer there is likely to be an escape into the house? *A.*—Not into the house, because it has to pass a long way and through a series of open spaces. It might enter under conditions favourable.

Q.—In what percentage of houses would you expect to find it? *A.*—That is impossible to say. You might find it in every house, or in none. It depends on many conditions.

Q.—What is the health of the people in a house where you find it? *A.*—It might have no effect or a serious effect; it depends on many conditions. If there was a serious escape, there would be a serious nuisance.

Q.—You know that natives live in a small room with the windows closed; if there was the slightest escape, it would be bad? *A.*—It might be injurious.

Mr. Bhalchandra K. Bhatawadekar: It is, I think, desirable to avoid a repetition of questions.

The President: Yes, it is very desirable; some of Mr. Mody's questions have already been answered.

Mr. Ardasir Mody continuing (to Mr. Weir): What percentage of sewer gas would produce ill-health? *A.*—It is impossible to answer that question now. Concentrated sewer gas would produce death; a less quantity, ill-health and depression.

Q.—In this model (red) you recommend catch-pits and not siphons. Would there be an escape of sewer gas if there was no siphon? *A.*—I don't think there would be an escape, but all my recommendations are based, as I have said, on the assumption that other means of ventilation are perfect, which will prevent sewer gas coming up through the traps or catch-pits.

Q.—Do you think the present rate of mortality is creditable to the City of Bombay? *A.*—In what way?

Q.—Taking it on the whole, what is the death-rate? *A.*—I believe it is 30 this week, but that would be an unfair way to take it.

Mr. Blaney: I think that would be an unfair way; but we are all a jury and can form our own opinions.

The President: We must go by the facts.

Mr. Ardasir Mody continuing: What do we call a healthy city? *A.*—I consider Bombay, taken on the whole, is a healthy city. There is no city in the world in which the mortality will not rise at certain periods. Our average is 25 or even less.

Mr. Bhalchandra K. Bhatawadekar: I object to these questions, on the ground that they are wandering from the subject.

Mr. Blaney: Dr. Weir has answered the question and stated that if sewer gas gets into houses it will aggravate illness and produce constitutional depression. The question is answered.

Mr. Ardasir Mody: When the natives use the *nahanis*, do all the connections work well, but when they use them as *morees* it is different? Dr. Weir says that when it is used only as a bath-room, then the siphon works well; but when used for other purposes, then the water in the trap is charged with gas and does not act? *A.*—That is so.

Q.—Practically the siphons do not act in all *nahanis* because they are used for other purposes?

Mr. Nanabhai Katrak: Mr. Mody will get nothing more by asking a question over and over again.

Mr. Ardasir Mody (to Mr. Weir): Generally siphons do not act well in the native town, but they do in large buildings? *A.*—Yes, in buildings such as private ones.

Q.—What is the system of death-registration in Bombay? *A.*—Has it anything to do with house-connections? Does Mr. Mody assume that we know nothing about registration?

The President: I think it is irrelevant.

Mr. Ardasir Mody: Don't you know that all these obstinate fever cases refuse to yield to ordinary treatment, but when the patient moves from the locality there is an improvement? *A.*—That is a general rule in all countries and all climates.

Q.—Don't you think that these cases only yield to change of air and not to treatment? *A.*—Yes.

Mr. Kaikhosro N. Kabrajee: As to the vernacular notices giving instructions as to the proper use of the house-connections; have you seen these notices and read them? *A.*—Yes.

Q.—And they contain instructions of an ordinary kind as to the proper care that is to be observed in using a house-connection? *A.*—Yes.

Q.—Do you suppose the notices are not read? *A.*—I think the only people who read the notices and pay any attention to them are the people who do not require them. The poor classes do not read them.

Q.—But they are of interest to the poor classes and they are not so blind as to remain ignorant when an attempt is made to educate them? *A.*—Poor people have to think of other matters which affect them more directly. There are people to whom the notices might be of interest and use, but they are the educated classes. The masses of the people are too busy to pay attention to them.

Q.—When they misuse the house-connections they are liable to prosecution. Would they not consider it better to study the notices and act accordingly? *A.*—I don't think they do.

Q.—Mr. Smith has said in his evidence that they have had good effect? *A.*—I am sorry I cannot agree with that view. But perhaps members of the Committee may be able to give better evidence on that point.

Q.—Have you had brought to your notice cases where house-connections are incompletely done and some not made at all? *A.*—I have noticed in some places that all the pipes have not been connected.

Q.—Are they not only not connected but sometimes indifferently done? *A.*—I have noticed that a pipe from a verandah or room has escaped being connected.

Q.—And in the same way the level of the gullies has not been uniform?

Mr. Blaney: I have already asked that question.

Mr. Kaikhosro N. Kabrajee: As a general question do you object to the house-connection system of construction? *A.*—I do not object to the principle, but only to certain details.

Brigade-Surgeon-Lieut.-Col. Banks: Do you think the supervision of the cleaning of the traps would be difficult? *A.*—Yes, I think so; very difficult.

Q.—In the case of a trap having more than one pipe discharging into it, can it be easily cleaned? *A.*—I think it is difficult.

Q.—Do you know the system at Dukarwady? *A.*—Yes, it was carried out some years ago.

Q.—Tell us something about it? *A.*—It was carried out by Mr. Braham as the result of a number of consultations between him and myself. It answered very well. Dukarwady was a lane or wady which at one time had many cesspools, and not only was the ground very much saturated, but there was a serious nuisance caused. And the effect of the system of house-connections then adopted was very great and very beneficial to the people. I remember the place well, and practically no obstructions occurred. The pipes were larger than those now used, and instead of small traps there were large hoppers.

Q.—How would you contrast the advantages of the pipe connections with the old system of gullies? *A.*—Well, the difference is this. Assuming that the house-connections work perfectly, they remove more quickly and without saturation of the ground the liquids, which, removed by the old gullies, admitted of saturation. In the old gullies you have the danger of saturation, and in the present system you have less danger.

Q.—Has the whole of the Kamathipura Registration Section been drained on the new system? *A.*—Not the whole of it.

Q.—Can you gauge from statistics what has been the effect of the system of new drainage? *A.*—Not yet.

Q.—Do you think it is safe to connect houses with cesspools? *A.*—No, I think it is dangerous.

Mr. Ardasir Mody: Which cess-pool does Dr. Banks mean?

Mr. Blaney: Any cesspool.

The Commissioner: Dr. Weir, you say you were not consulted with reference to what we may call the new system of house-connections? *A.*—No.

Q.—Neither before they were brought into vogue nor since? *A.*—No.

Q.—Neither by the Commissioner nor the Engineer? *A.*—No.

Q.—How long have you held the views with regard to them which were expressed in your report of the first quarter of the present year? *A.*—Some time.

Q.—Does that mean years? *A.*—I have for the last 5 years—practically since the system of house-connections has been working in Kamathipura?

Q.—Then you have held them since 1882?

Dr. Blaney: Oh, long before that.

Surgeon-Major Weir: I think about six years ago.

The Commissioner: In point of fact, since the new system was brought into vogue, you have held your present opinions upon it. May I ask if you have expressed them? I do not mean by casual reference, but specially by report to the Commissioner? *A.*—Yes, more than a year ago. I think the most recent was my report a little more than a year ago.

Q.—The report to the Commissioner? *A.*—Yes.

Q.—Will you kindly put that report in? Was it in answer to a call? *A.*—I think it was on my own initiation.

Q.—Kindly let me have a copy. Now in your report which gave rise to the formation of this Committee you use these following words (of course you and I have already discussed the matter): "In my opinion all attention should be fixed on the construction of drains, and, as I have before urged, the construction of house connections abandoned." That hardly expresses what you mean unless you have some system of house-connections. What is the use of drains? *A.*—It only referred to the present system.

Q.—You go on to say it is not suitable to all houses; you mean the present system? *A.*—Yes.

Q.—You quoted in the same report from a report you made in 1881, in which you make reference to the nuisance existing in Sewree Road and the northern district of the island; you referred to the nuisances from the want of drains, not from their existence? *A.*—Yes, from the absence of drains.

Q.—I assume I should be doing a great injustice if I said you advocated the absence of sewerage? *A.*—Certainly.

Q.—And sewerage of course involves some system of house-connections? *A.*—Certainly.

Q.—Well, now, with regard to this model behind you; you object to the siphon shown at the end—the water seal? *A.*—Yes.

Q.—You would have simply a catch-pit and direct communication; what is the catch-pit for? *A.*—The interception of solid matter such as sand, earth, grass, stones, rags, &c.

Q.—The catch-pit would intercept all solid matters, and nothing but what was liquid would pass into the sewer? *A.*—Yes, but partly liquid matter as cowdung might pass.

Q.—In that case what is the objection to a siphon? *A.*—The objection is that it is not so easily cleaned as a catch-pit and it is likely to be offensive.

Q.—But I am not contemplating the doing away with the catch-pits which *ex hypothesi* prevent solids getting into the siphon and getting choked? *A.*—The bend of the siphon gives greater facilities for the adhesion of solid matter than the catch-pit which I have named.

Q.—Yes; but if no solid matters pass into the siphon? Your catch-pit is to intercept solid matters. A catch-pit is what I wrote myself to Mr. Walton about and asked him to devise one. I don't see, having intercepted solid matter, why you should not have a siphon which *ex hypothesi* could not be choked? *A.*—If a siphon happens to be filled with foul matter, it acts as a cesspool. The fewer catch-pits or siphons you have, the better.

Q.—Do you advocate, what I believe every Sanitary Engineer in Europe advocates, the use of water to fill the space occupied by the diameter of the house drain between the pipe sewer and the house which may be called a water seal? *A.*—I do, undoubtedly.

Q.—It is not only theoretically advocated, but practically, and put into use all over Europe? *A.*—Here you have not generally the class of building to which I advocate that a different system of house-connection should be applied. You cannot have a water seal in tenements. It must be a sewage seal.

Q.—Why? *A.*—Because the people in Europe who are likely to use places connected with sewers are more likely to take greater care about flushing than the people here.

Q.—I confess I don't follow the reason? *A.*—You have not in Europe in each room a bath place and you have not rooms so crowded as here and you have not each person cooking in each room. Life is under different conditions. The people in Europe throw washings into the sinks.

Q.—Which connects with the house drain? *A.*—Yes.

Q.—So it seems you get the same thing only by other means? *A.*—Here you have so many different drains leading from different rooms, and consequently you have a greater danger.

Q.—I will endeavour to illustrate your opinion. Theoretically you would advocate a water seal; do you think here it becomes a sewage or night-soil seal? *A.*—Yes.

Q.—Is a siphon attached to a house-connection in this country—you must put solid matter out of your mind—more likely to be a sewage seal than a siphon attached to a water closet? *A.*—That is putting it in a different way. I think it is a little more likely.

Q.—You know that the English model by-laws insist on a siphon to every water-pipe? *A.*—Yes.

Q.—And you know that most advanced works on Plumbing and Engineering tend to advocate an increase rather than a decrease in the use of siphons and water seals? *A.*—Yes.

Q.—Do you, like myself, know a good deal about the lower orders in our own country? *A.*—Yes.

Q.—And, though it is true, you may not get sand to the same extent you do here in a house-connection, yet you get a mass of insoluble matters, thick paper and every bit of refuse which the

user of a connection does not know how otherwise to dispose of. I was told the other day by an officer in the Royal Engineers under Government that not long ago an order had to be issued restraining the soldiers from using delf. It is a mistake to suppose that insoluble matters only get into house-connections here, and if, considering that is a circumstance at home and Sanitary Engineers nevertheless advocate no less than three water seals between every house-connection, do you think it is safe to omit them here—not to have one? *A.*—Yes; in England you have in each closet a flushing tank.

Q.—In the old closets it was very frequently out of order? *A.*—Assuming you have a flushing tank, then my objection to a siphon would in a great degree disappear.

Q.—But you know that the old system very frequently got out of order, which is something like a breakdown of a house-connection here. But it was not on that account condemned? *A.*—Take water closets in Bombay.

Q.—I don't know any which are not good ones? *A.*—You find offensive smells here, and it is often caused by the siphons.

Q.—But there are hardly any? *A.*—There are some we know of.

Q.—There are some in Kamathipura and the Fort, but they are rare and exceptional? *A.*—Even at the clubs there is an offensive odour about them.

Q.—I have not noticed it myself, but in any case you can hardly put the inhabitants of clubs in the same category as mill hands. You think that with the catch-pit the water seal is unsafe, because it does not contain water; it is more apt to contain filthy than clean water. *A.*—Yes.

Q.—Your only objection is to the character of the liquid? *A.*—Yes.

Q.—But, assuming you abolish your siphon, you have no water seal at all between the grating which leads to the open and the sewer which conveys the sewage of one thousand houses. You nevertheless think it is more dangerous to protect buildings by means of a water seal than to leave it open and the smell from one thousand houses to come right up the gully? *A.*—Putting it as you do now, I say it would be better to have a siphon.

Q.—I don't want to twist your answers, but merely to get at your views on this question? *A.*—If you abolish siphons, you must have other means and trust to a larger amount of sewer ventilation than you have now and trust to the sewers having less deposit in them. To close your sewers and then trust to ventilation near houses is wrong. That is what the advocates of siphons do. You must have ventilation away from the houses.

Q.—Do you think we have too few ventilating shafts? *A.*—Yes. But still we have more than they have in Europe.

Q.—It appears to me that you think the safest sewers are open canals? *A.*—No. I think you ought to have shafts or surface ventilation at every fifty or one hundred yards.

Q.—But surely surface ventilation is dangerous? *A.*—You render it innocuous if you have a large number of surface openings;

the emanations are much less perceptible from the old sewers than they are from the new and better constructed sewers.

Q.—But you don't get *ex hypothesi*, if the sewers are in proper order, any emanations at all. However, you do not advocate open sewers? *A.*—Certainly not. But at the same time if the city could and had open drains, perhaps it would be the most perfect system you could have.

Mr. Blaney: (Hear, hear.)

The Commissioner: Does the city permit of it? *A.*—No. In the case of a city on the side of a hill permitting of open drains, they are much better.

Q.—Well, now excuse me asking you whether you do not think your objections to all siphons as such. Do not answer the question if you would rather not; it is a little personal? *A.*—Allow me to explain. Of course you know my views as well as I do. I have not proposed the abolition of siphons in buildings such as the Secretariat or the better class of buildings where the system of house-connections should be applied.

Q.—Your only reason for not objecting to siphons in these better class of buildings is that they are flushed more efficiently? *A.*—Yes, and the siphon serves its true purpose.

Q.—And although in other cases the siphon cannot be choked because it is prevented by the catch-pit, you think that they would be very likely to contain filthy liquid? *A.*—Yes.

Q.—Supposing we had an automatic flusher at the head of the gullies, would your objection be removed? *A.*—Yes, to a very great extent.

Q.—Do you think on consideration the views you hold with regard to the evil of siphons are not a little exaggerated? *A.*—I don't think so; I have known so many nuisances caused by siphons even in houses occupied by Europeans, the Sirdar's Mansions for instance, that I think the disadvantages are greater than the advantages.

Q.—The sewer gas which you get in a large closed sewer is apt to be very dangerous? *A.*—Yes.

Q.—And you get the same class of emanations in a pipe sewer though not so concentrated? *A.*—Yes, and the same in a trap.

Q.—The discharge of that gas immediately under a window of a house from a twelve inch pipe sewer would be a serious thing? *A.*—Yes.

Q.—Do you think that from a choked siphon there is any such danger to the inmates of the house? *A.*—I think you may have a serious nuisance and danger.

Q.—But a dangerous nuisance. Is there any reasonable comparison between the two? *A.*—Yes, I think there can be a comparison.

Q.—You think that a choked wall siphon or a gully trap, to use Dr. Bhalchandra's words, is as bad as a concentrated dose of sewer gas from a 12" pipe sewer? *A.*—If a siphon is filled with night-soil and urine, it becomes a serious nuisance and danger.

Q.—You know, as a matter of fact, that the siphons which get choked are not those connected with privies, and you are also aware—I take Mr. Smith's statement as being that of a person possessing knowledge—that the choking of siphons is due to sand? *A.*—Yes and to other refuse.

Q.—Often to leaves and sand, but seldom to night-soil. Do you know of a case of night-soil? *A.*—I have seen traps so seldom obstructed by night-soil that I take it practically they are never obstructed.

Mr. Blaney: I have seen pipes 40 feet high choked, which have occupied a week in cleaning. Why, in Withalwady there was a down-take pipe where night-soil was floating over the pipe.

The Commissioner: Do you attribute any serious increase in disease or mortality to the new system of house-connections? *A.*—No.

Q.—And most of your reports on the subject of drainage and sewerage have been in condemnation of districts where the drainage system had not been carried out? *A.*—Yes.

Q.—Your view is that the main cause of fever is overcrowding. What you say is that "much of the fever prevailing in tenement houses is due to the insanitary surroundings without or the filth of the gullies"? *A.*—I referred to those districts that suffer from an absence of drains.

Q.—You would not recommend the doing away of the water seals and siphons in houses where they are not apt to be misused? *A.*—No.

Q.—In buildings like the Secretariat? *A.*—Certainly not.

Q.—In our own bungalows if we had connections which I wish we had.

Mr. Ardasir Mody: You are much better without them.

The Commissioner: I don't agree with you. You say we are better without connections at all, and that we should live in cess-pools and deposit everything in front of the door.

Mr. Ardesir Mody: Yes, if it is removed every day.

The Commissioner (to Surgeon-Major Weir): Your reason is that where the siphon is treated properly, it acts as a prevention to the entrance of sewer gas? *A.*—Yes.

Q.—You would apply this system (referring to the red model) to three-fourths of the houses in Bombay? *A.*—Yes, tenement houses.

Q.—And you maintain the opinion that there should not be a siphon at the end of a house drain, only if there were means of effectual flushing? *A.*—In that case my objection to the siphon would be much less.

Q.—You say that the house-connections in Dukarwady were appreciated and were admirable? *A.*—Yes.

Q.—You know the condition in which they were found when the Queen's Road and Girgaum District were house-connected not long ago? *A.*—Yes, but the house-connections had not been looked after. The system, so far as the prevention of obstruction and carrying away refuse was concerned, was undoubtedly a success.

Q.—The down-take pipes discharged directly into the open bend?

Mr. Smith: There was a break.

Surgeon-Major Weir: It was much like a hopper.

Mr. Blaney: You mean the funnel?

The Commissioner: Yes.

Q.—With regard to ventilation, I don't understand your opinion that ventilation pipes only act with safety where they cannot be tampered with. Of course if they are broken, they cannot ventilate. *A.*—I mean if they are not obstructed.

Q.—How are they obstructed? *A.*—By a leaf or rags or nests, or they may leak at the joints.

Q.—But you have to get on the roof of the house on purpose to stuff rags down? *A.*—The new system of pipes having T heads are not so likely to be obstructed as the old system.

Q.—You are not an enemy of the extension of the present sewerage system apart from house-connections? *A.*—On the contrary I have been a very strong advocate of it. Look at my reports as far back as 1875.

Q.—Naturally, I merely put the question in order to have it put on record. I myself was perfectly aware of your views. You also recognise the necessity for house-connections of some sort? *A.*—Yes; I recognise the fearful nuisance where there is no drain.

Q.—And supposing the simple system of house-connections shown in that model could have adequate means of flushing gullies, your objection to a siphon would disappear? *A.*—Yes to a great extent.

Q.—Don't you think that having a mass of down-take pipes from a large chawl containing two hundred people would cause great nuisance? Practically we know, however careful we may be as to levels, gullies cannot be kept clean. Although the department lay them at a proper level and with patent stone, there is always more or less deposit. Don't you think that would be a greater nuisance than a choked house-connection? *A.*—I think there would be a greater nuisance in the gully, but the danger to health would be less. (Hear, hear.)

The Commissioner: I trust the reporter is taking down the "hear, hears." They are most suitable.

Mr. Blaney: I think we have the right when the witness is under cross-examination to encourage him a little.

The Commissioner: The question is, how far is the witness likely to be influenced by these exclamations.

Mr. Blaney: I don't think that Lord Salisbury was ever affected by "hear, hear."

The Commissioner: I trust you will appreciate the comparison, Dr. Weir.

Surgeon-Major Weir: I do.

The Commissioner: You think the danger to health would be less, though the nuisance greater? *A.*—I would only add one word. I am not committed to any system whatever. Assuming this model is approved of, I think it would be well to give it a trial, for instance

round a group of chawls, because it is only by practical experiment that you can get a knowledge of the best system. I will be quite prepared to find that my opinions have to be modified and that in many ways they are not so practical as I would hope.

Q.—No one knows better than yourself that I am not committed to any system. The present system was initiated by officers long before I was connected with the Municipality. Have you examined the system in Khetwady? Don't you think there is a great improvement? *A.*—Yes.

Q. Don't you think that that rather tends to establish the conclusion that people can be educated into the proper use of house-connections? *A.*—I think it rather tends to establish the conclusion that the larger the establishment you have the better the work is done. I think the people are just the same as they were.

Q.—Precisely; but why not have the larger establishment? *A.*—I think the task of supervision would be too severe and difficult.

Q.—Was it not always recognised that a severe system of supervision would be necessary?

Mr. Blaney: We were always told that it would work by itself.

Surgeon-Major Weir: I am speaking from memory, but I think we were told that no establishment whatever would be necessary. But it can be established by a reference to records. I always said an establishment would be necessary.

The Commissioner: I have put on record myself the opinion that it is essential that you should have a staff to look after them. We must ascertain that by record.

Q.—You don't attribute the improvement in Khetwady to the people, but to the department? *A.*—To the department.

Q.—You have said in one or two of your answers, and very rightly, that the people are just the same here as in Europe and have the same tendency to be careless and neglectful. You find the same qualities in the human race wherever you go? *A.*—Yes.

Q.—You are aware that the difficulties which beset us here have been successfully dealt with all over Europe and Sanitary Engineers have refused to alter what is called a scientific system of house-connections? *A.*—Yes. I would say that, in regard to Khetwady, Kamathipura and Dhobie Talao, it is possible for the Commissioner to take an amount of interest which he could not take in the whole city. I don't think you can judge of the improvement in the whole system by these places. It is possible by attention to one locality to make an improvement which could not be made over a larger area.

Q.—Why should not the heads of the department constantly keep an eye on the different districts? With regard to myself I have not visited Khetwady more than once in three weeks or a month? *A.*—When a question presents new aspects, more interest is taken in it.

Q.—What new aspects are there? *A.*—The house-connections have claimed a great deal of attention.

Q.—It is more than a year ago since I wrote a memorandum on them? *A.*—You have said a great deal in that memorandum that I have given expression to.

Q.—I pointed out in that memorandum the results of the working of the siphons. Don't you think that on the whole, even putting aside the operations of the Drainage Department, a newly connected district shows worse results than the old connected districts? *A.*—I think some of the new districts show worse results.

Q.—There are less gully traps choked. I mentioned in the memorandum, to which I have already referred as the result of careful observation, the extraordinarily unfavourable contrast between Queen's Road and Girgam and Khetwady which is the older connected district. I trust that Dr. Weir will not think he has been subjected to too severe an examination; all I have said has been merely with a view to ascertain his opinions and have them put on record.

The President (to Surgeon-Major Weir): You are opposed to the system of siphons especially in tenement houses and chawls because there has not been sufficient flushing? *A.*—Yes, chiefly for that reason. If there was more flushing, there would be less obstruction.

Q.—Is it possible, considering the habits of the people? *A.*—I would rather put it in another way; my objection to the system would greatly disappear with the recommendation of the Commissioner as to flushing.

Q.—Is it possible to have that kind of flushing, considering the habits of the people? *A.*—You cannot have flushing in tenement houses. It must be Municipal flushing from outside.

The Commissioner: That is what I suggested—an automatic flusher in the gully.

The President: You cannot have the requisite from the inside? *A.*—Not from the houses themselves.

Q.—Is it not necessary that the system of house-connections should be suited to the habits and customs of the people? *A.*—I think it is absolutely necesssary.

Q.—It is possible to educate the people to the required knowledge of the system in a few years? *A.*—No. I think your system must work upon the lines that have been adopted by the people.

Q.—Especially when you find in Europe people don't change their habits and customs? *A.*—Poor people are always conservative.

Q.—You are aware that, owing to this habit of the people in regard to cleaning their pots and utensils, there has been chokage of down-take pipes? *A.*—Yes.

Q.—Can any recommendation with regard to siphons which have the approval of Sanitary Engineers in England be made applicable to the state of things here? *A.*—I think the opinion of authorities in Europe must be modified in this country to suit the habits of the people. I would like to say to the Commissioner with regard to siphons that the cow-dunging of rooms here opens a means towards the fouling of siphons which does not exist in Europe. Cow-dung and rice or any food form a tenacious mould.

Q.—Are there any houses in England inhabited by tenants in the same manner as in Bombay? *A.*—There is not the same crowding.

The Commissioner: There is something very like it in London. Is there anything in the habits of the people—referring to the Chairman's question—opposed to having a flushing tank at the head of the gully? *A.*—No.

Q.—Is it the general opinion of all Sanitary Engineers that no large town can exist in a healthy condition except it has drains? *A.*—Yes.

Mr. Blaney (to Surgeon-Major Weir): Are there any drains in Worlee village? *A.*—No.

Q.—What is the population; about 11,000? *A.*—That is the Census return, but it includes nearly half the whole district.

Q.—What is the rate of mortality? *A.*—The rate of mortality for the whole district is very low.

Q.—Steadfastly low, much below that of the city of Bombay? *A.*—Yes.

The Commissioner: Is Worlee as crowded as Kamathipura? *A.*—The district is not.

Q.—The inhabitants are nearly all fisher-people? *A.*—Yes.

Q.—People who lead a healthy life? *A.*—Yes.

Mr. Blaney (to Surgeon-Major Weir): Is a siphon in Bombay more likely to become a source of nuisance than in Europe? *A.*—Yes.

Q.—Because decomposition takes place more readily? *A.*—Yes; there are also other reasons.

Q.—The Commissioner led you on to show what a bad set of people the English are in the use of the water closet and sewers; is it the exception in England to misuse sewers? *A.*—The poor classes in England are as bad as they are here.

Q.—Is it the exception in England to misuse sewers by introducing solid matter, and is it the rule in India? *A.*—That is a question I would hesitate to answer without consideration.

Q.—But do the people in India put more solid stuff into the sewers than they do in England? *A.*— I think there is much more solid stuff put in here.

Q.—Would smells and stinks from water closets be more injurious here than in England? *A.*—They are injurious anywhere.

Q.—They rise more quickly here? *A.*—Yes, but I must qualify the answer; there are more means of ventilation in this country.

Q.—With regard to your answer to the Commissioner about flushing gullies, I understand that these flushers are to be placed at the head of the gully to sweep the whole house drain? *A.*—The Commissioner put a case, assuming the tank was at the head.

Q.—Would that do away with the slimy deposit you have described as sticking to the side of drains? *A.*—I think there would always be a slimy deposit.

Q.—Is it possible to have open drains more carefully attended to than closed drains? *A.*—I think so.

Q.—Have house-connections been put up in districts having no drains? *A.*—Yes.

Q.—Where? *A.*—Colaba and the northern portion of the island.

Q.—And Agripada? *A.*—Yes.

Q.—What are the advantages of the old system of house-connections, and which you approved and put up in Dhobie Talao? *A.*—I think it had many advantages over the present system. The advantages were fewer siphons and moveable sides on pipes; very few obstructions occurred.

Q.—Is it possible to clean a trap such as you have in the new system as easily as a commode? *A.*—Quite impossible.

Q.—Is there a difference in climate between India and England? It was a point dwelt upon by the Commissioner that what Sanitary Engineers do for the people of England was law for the world.

The Commissioner: Has that remark gone into the notes?

The Reporter: Yes.

The Commissioner: Then I must utterly disclaim that interpretation of my views.

Mr. Blaney: That was the impression I received from the Commissioner's cross-examination.

The Commissioner: I cannot help that.

Mr. Blaney: I said what you led me to believe.

Q.—Is there any difference in climate, Dr. Weir? *A.*—Yes.

Q.—And as regards sewers and diseases? *A.*—Yes.

Q.—And people? (No answer.)

The Committee then adjourned its sitting until Friday, the 12th August.

Bombay, 12th August 1892.

At the meeting of the Committee held this day, there were present:—

Javerilal U. Yajnik, Esq., *President*; Ardasir D. Mody, Esq.; Brigade-Surgeon-Lieut.-Col. S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; Dominick A. D'Monte, Esq., M.D.; Fardunji N. Bisni, Esq.; Muncherji C. Murzban, Esq., C.I.E.; Nanabhai N. Katrak, Esq.; Pherozeshah M. Mehta, Esq.; Accacio G. Viegas, Esq.

The Acting Executive Engineer; the Health Officer; the Secretary; and D. Gostling, Esq.

The minutes of the meeting held on the 5th instant, were signed.

Mr. Blaney: I wish, with the President's permission, to ask Dr. Weir four questions.

Mr. Pherozeshah M. Mehta: Dr. Weir is always available, and I think we had better proceed with the examination of Mr. Gostling who is attending here specially for that purpose.

Surgeon-Lieut.-Col. Weir: I wish to hand in a plan on which I was asked to give an opinion. I also wish to put in a copy of my report on house-connections of the 30th May 1891.

Mr. Pherozeshah M. Mehta: These plans were put in at the end of Mr. Smith's examination.

Mr. Smith: Yes. I also now put in plans available for the members of the Committee.

Surgeon-Lieut.-Col. Weir handed in copy of letter No. 7247 of 1891-92, dated 30th May 1891, from himself to the Commissioner, through the Executive Engineer, Drainage, as requested by the Commissioner at the Committee meeting held on the 9th instant (*see* page 94 of these minutes):—

SIR,—I have the honor to submit the following remarks on house-connections. Now that a large area of the City has been sewered, the question of cleaning and keeping clean the many connections from houses is one which demands consideration.

From various causes, more or less beyond our control, but chiefly to the absence of a full water supply, and the use of ashes and earth in cleaning domestic utensils, and the practice (which it is impossible to stop) of throwing refuse and food remains into *morees* and from windows into gullies, the traps and connections of the new sewers become very frequently choked and overflow, causing in many cases a nuisance more serious than was the case when the refuse water from the houses flowed into and over the old open paved gullies.

From time to time as the various sections of the new drainage system have been taken in hand, the Contractors and the Drainage Department have employed a certain number of men to look after the new connections and remove the obstructions found, but the staff so employed has always been inadequate to deal promptly and efficiently with the numerous cases of choked connections and consequent nuisances.

Beyond having in each Ward a few gully trap plungers, the Health Department has no appliances for removing the obstructions I refer to, and frequent requests have had to be made to the Drainage Department to have the nuisances removed. In many cases I regret that re-iterated complaints and requests to the Drainage Department have failed to produce any result, and the excuses made were that the Drainage Department had no staff to do the work, or the work should be done by the house-owner, or if a deposit was paid the work would be done by the Drainage Department.

Before making these applications to the Drainage Department we invariably endeavour to remove the obstructions with the staff and appliances at our command.

The Drainage Department does not look at nuisances in the same light as the Health Department. The Drainage Department does not consider the matter in the serious way we do, for the simple reason that the Health Department is the department primarily responsible for the removal and abatement of nuisances, and there is therefore not the same promptness displayed by the Drainage Department in dealing with nuisances which affect the public health. The Health Department is considered to be responsible, and it has to bear the blame of not dealing with and removing nuisances.

In dealing with the actual work of cleaning these house-connections, several points must be considered.

First—The laying of pipe drains in sweeper's passages and gullies has not lessened in any way the work of Health Department staff, for

gullies have to be swept and cleaned and inspected as before, refuse and water are thrown from windows, connections become obstructed, and labourer's time is taken up in removing silt and dirt from traps.

Second—In the case of obstructed privy connections our Mahars will not interfere. They object very strongly to do such work and we cannot compel them to do it.

Third—The men employed by the Drainage Department and the Contractors for clearing obstructions are halalcores, and are paid halalcore's wages (Rs. 11-8). These men work fewer hours than the Health Department labourers (for instance, they attend muster only at 7 a. m., while our men attend at 5 a.m.), and some of our Mahars have made it a grievance that the men in the Engineer's Department who clean gully traps receive more pay than they do (the Mahars) for practically the same work.

The Executive Engineer has asked me to take over the cleaning work of these gully connections. He says he has no staff and cannot do the work. I must give the same answer. I cannot spare men without seriously interfering with existing arrangements. More men therefore are required, and I think that, as the cleaning of gullies is done by the Health Department, these new men should be under my orders.

There seems to be a general opinion in the quarters of the City, where the new pipe drains have been laid, that, as the Municipality has laid them, it should clean them and keep them in order, and that no responsibility should rest on the house-owner, and that, in cases where the pipes and fittings have been laid at the expense of the house-owners under Municipal inspection, that once having laid them according to Municipal direction, no further demands for alteration should be made (we have a case in the Police Court now in which this defence has been set up).

By section 242 of the Act the drains, fittings, &c., laid at the public cost for the use of buildings not belonging to the Corporation are to vest in the Corporation unless otherwise determined, and section 253 provides for the inspection and examination of all drains whether constructed at the public or individual cost, and section 257 gives power to call for repairs, cleaning, &c. Section 242 would therefore seem to contemplate the cleaning by the Municipality of all drains laid at the public cost as they are to *vest* in the Corporation, *unless* otherwise determined. I do not remember that any determination on the part of the Corporation has yet been arrived at.

In order that any doubts in the public mind be removed and that our legal position may be made sure, I suggest that the folllowing points be considered and decided :—

First—Whose duty is to clean, repair and maintain all pipe drains, fittings and connections above and below ground which have been, and are to be, laid at the public cost ?

Second—The procedure to be followed in dealing with choked traps, and in cases where there is a drain in joint use by more than one person (I speak of drains laid at public cost) and where it is necessary to break up the pipe itself, who is to bear the cost ?

The system of drainage which we have adopted is not one which finds favour in the mind of the great bulk of the population. Even

the educated classes do not generally approve, and there are many Europeans who distrust the principle. The prevalent idea being that the system of traps and ventilators is too complicated and not suited to the requirements of an oriental population. We are committed to the system; we must make the best of it and endeavour to remove by every possible means all causes which might give rise to dissatisfaction and complaint.

I would also suggest that the Drainage Department (and I presume the matter has had their attention) should take advantage of future extensions of the system to introduce improvements which would tend to do away with some of the existing defects. There are one or two I might suggest—the provision of catch-pits which would intercept and receive ashes, sand, &c., before such refuse could reach the gully traps; the down-take pipes should not dip into the mouths of the gully traps in such a way as to prevent the insertion of the hand or a plunger, as in many cases they do now.

One great improvement has been effected in the gullies recently sewered, and that is the making of a small channel in the centre of the gully. This confines the overflow from any trap to a very small surface. Many of these gullies have been cemented, and the appearance is very good and clean. These gullies will, I presume, require repairs in course of time and the question now arises, who is to bear the cost —the Municipality who did the work, or the owners of the gully?—I have, &c.

T. S. WEIR,
Health Officer.

The President read the following letter:—

BOMBAY, *12th August* 1892.

THE PRESIDENT,
Municipal Corporation, Bombay.

SIR,—As a Sub-Committee is now enquiring into the working of the house-connection for drainage in Bombay, I will be glad to give the Committee the assistance of my evidence as an expert on the subject. Next Friday, if agreeable to the Committee, will suit me.—I am, sir,

JOHN WALLACE.

Mr. Pherozeshah M. Mehta: I think we are agreed that we shall be happy to accept the offer.

Three o'clock on Friday, the 19th August, was then fixed for the examination of Mr. Wallace.

Examination of Mr. David Gostling, F. R. I. B. A., F. S. A., Architect, and Partner, Messrs. Gostling and Morris's firm.

The President: What is the special point on which you are prepared to give evidence, Mr. Gostling.

Mr. Gostling: Mr. Barrow sent me a series of questions prepared by Dr. Blaney, Dr. Bhalchandra Krishna, and Dr. Katrak. I have carefully considered those questions and have written out my answers in a connected statement, which, with your permission, Mr. President, I would like to read to the Committee. When I have done so, I shall be glad to answer any question which may arise out of it.

Mr. Gostling then read his paper as follows:

"The house-connections are said to be designed upon a 'scientific system,' or in accordance with 'scientific requirements.' This is, I think, hardly a correct way of putting it. Science means 'exact knowledge.' But the house-connections show in their design want of knowledge of the habits of the people. Traps and syphons are only intended for the passage of water or sullage free from sediment. Where sediment is present such appliances are worse than useless. When a member of the Corporation, I insisted that one great difficulty the new closed piping would have to contend with would be the sediment of earth and ash which would enter from the daily cleansing of the cooking-pots. I was told 'I knew nothing about the subject. The syphons would prevent all sediment from entering the pipes.'

"I will give one instance taken from London experience to show how delicate an instrument a syphon is and how easily it gets out of order. I have stated that only pure liquid sullage or solids such as *excreta*, which in great part speedily dissolve, is allowed in England to enter a sewage pipe. It is found that the most frequent cause of the choking of water closet syphons at home is human hair. This is insoluble. It clings to the sides of the syphon. Being of a woolly nature, it daily accumulates into a hard ball, with the result that it chokes the orifice of the syphon, and has to be removed by hand.

"I am afraid that English experience in drainage matters will not help us much in solving the difficult problem of "how to design suitable house-connections." Long experience of India and intimate knowledge of the habits of the people will serve us in better stead than a knowledge of the details of house drainage found suitable for London and other large English towns.

"For instance, the theory of the "separation of drainage from storm-water." It is only a theory at best. London has been drained in ignorance or defiance of it, though in the new drainage in the suburbs of London the theory is being acted upon effectually.

"But I am of opinion that such a system is both unnecessary and unsuitable in Bombay. We live on a long narrow island. Our climate is dry for eight months of the year, and is subject daily to more or less heavy rain-fall during the remaining four months. During the eight dry months, a double system of drainage is clearly unnecessary. During the other four months, while heavy rain is falling, the street drains, which are narrow pipes, 6 to 9 inches diameter, will run full bore, but the large proportion of the rain-fall, slightly diluted with the sewage, which cannot enter the sewage pipes owing to their being full, will overflow by means of the street drains rapidly to sea. Such storm-water is so thinly diluted with sewage and escapes so rapidly as to be quite free from danger to health.

"I say therefore that, so far as house gullies and house-connections generally are concerned, it is unnecessary, unwise, and unscientific to attempt to separate storm-water from sewage. It is this attempt to transfer a theory suitable for England to Bombay, which has resulted in the house-connections as now carried out, proving a practical failure.

"I am of opinion that, owing to the universal use of ash and earth in cleaning cooking-pots, syphons are unsuitable in any gully in Bombay, European or native. In European houses all the work is done

by native servants, who form the larger proportion of the residents in such house. I am of course alluding to dwelling-houses, not buildings used as offices, where there is no cooking done.

"Then, again, the system, universal among Hindus, of eating from plates made of leaves sewn together, and which are thrown away into the gully after such meal, mixed with the scrapings from the earthed and cow-dunged floor, shows the unsuitability of syphons, which must get speedily choked.

"The first requirement, then, in Bombay is to secure a cleanly disposal of this *kachra*, a separation *from the commencement* of the *kachra* from the sullage water by providing an iron *kachra* pipe or shoot from top to bottom of the house of each set of tenement rooms, of a size 8″×8″ or 9″×9″, shaped somewhat as sketch (*see* illustration I), fixed to the wall by two strips of wood, each 3″ × 3″, and which would form a portion of the pipe. A small hole about 4″×4″ would be made through the wall from each room, and the *kachra* would be passed into the pipe by hand or pressed through by a stick. If such a pipe were made of thin galvanized iron, it would last many years, and would be made and repaired by our local Borahs at moderate price. In order that these pipes may prove no obstruction to persons passing in the gullies, the bottom of these pipes should cease at the height of 7 feet above the floor of the gully. The contents would of course be deposited in a heap on the paved floor in a dry state. The open gully drains described further on should be covered over at the foot of the *kachra* pipes, to prevent the *kachra* from choking the drains.

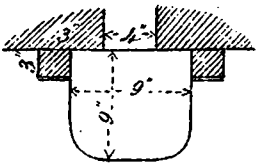
"The present system is to throw the *kachra* into the gully out of the window. There is no other means of disposing of it. This system is considered so great a nuisance that in many gullies it is usual to fix sunshades, in places where sun never enters, for no other purpose than to prevent the *kachra* thrown by your neighbour from falling into your window. These refuse-protectors prevent the air and smoke from escaping from the rooms, and are thus a hindrance to ventilation and provocative of disease.

"If no *kachra* entered the *moree* pipes, the present pipes, 2½″ diameter, would be of sufficient size to pass the sullage water; 3″ diameter would be ample size. But if no special provision is made for *kachra*, as above indicated, *moree* pipes of 6″ diameter would choke up at times.

"Dr. Katrak has made a suggestive remark in his first question to me, which has set me thinking.

"So long as natives use *morees* for urinating and encourage their children to use them for defecating, so long must down-take pipes smell of sewage. Now that, under the new Bye-laws, privies have to be constructed on each floor, medical men should encourage their patients to give up the baneful habit of using *morees* for so unsuitable a purpose. The smell of urine on an unwashed *moree* is terrible, and must cause disease.

"I can give a practical turn to Dr. Katrak's question by suggesting that down-take pipes should be constructed with an open slit in the middle of such pipe; the slit to face the gully away from the wall. The water in the pipe will naturally cling to and flow down the solid portion of the pipe, but in order to prevent any water from escaping through the slit and being a nuisance to people using the gully, when casting the pipe, shallow grooves should be made in the core round the slit and sloping downward on each side of the pipe in the direction away from



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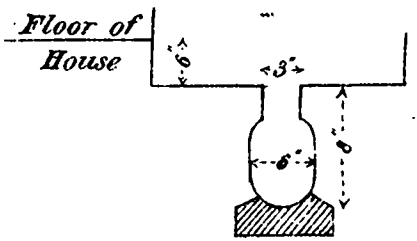

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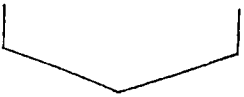

No 4.

the slit. Such a slit will perfectly ventilate the pipe, and prevent it from smelling. If cast in the manner I have described, a pipe with a slit as sketch (*see* illustration 2), the pipe would be almost as strong as a solid pipe, and the breakage on boardship ought not to be large. But I do not see why such pipes should not be cast locally at a cheaper rate than they can be ordered for from England. If our local iron founders were encouraged to import suitable fine pig iron for these castings, it could be done. Pipes should be galvanised locally before being fixed.

"I am of opinion that the house-connections should not be by means of closed sewage pipes. The gases from the orifices of these pipes will naturally travel up the pipes and enter the rooms along the branch pipes in the *morees*. The sullage water should flow down open gutters constructed in masonry. These gutters should not be less than 6 inches wide at the widest part, and not less than 8 inches deep. These gutters should be constructed below the floor of the gully so that the floor may be always dry and clean to walk on. The floor of the gully, which I should prefer to call a passage, should be 6 inches below the floor of the houses. It should be level from side to side, to prevent slipping, and be laid at this level from end to end of the passage, so that it may be so used by the residents. The suggestions proposed by me would do away with the filthy character of the gully as it now exists, and it could be used as a second passage or entrance to the house, if need be. The floor of the passage to be in Bombay cut-stone, medium-dressed, in the same style as the street pavements. The passage should be entered by cut-stone steps from the street. The gutter should be 3″ wide at the top, for the double purpose of easy use as a passage, and to prevent *kachra* from falling in. To be of an ovoid shape on the bottom. The bottom to be sloped from end to end of the passage, as much as can conveniently be obtained. I give a sketch in the margin (*see* illustration 3). The minimum depth shown in the sketch is 8 inches, the maximum depth might be 2 or 3 feet. Such a depth would seldom have to be exceeded even in those excessively long Kamathipura gullies. The gutters would be cleansed daily by the halalkhores, something in the same way as the grooves of the tram-rails are cleansed. An iron scraper, shaped like a curved rake, would be passed along to the bottom to rake out any possible *kachra*, the strong flow of water always passing down the channel would do the rest. Occasionally only would a broom be necessary. The invert to be of Bombay cut-stone which is cheap and would last for ever.

"Similar side gutters would be made to carry the water from the *moree* pipes on each side of the passage. But the top of these cross gutters would be covered by the paving, a circular hole 6 inches diameter, being cut in the paving to receive the water from the *moree* pipe. Such short lengths of drain would not choke, and could easily be cleaned by hand if necessary.

"Such gutters would effectually drain the subsoil water from houses. The floor of the passage being dry, clean and level would in time be regularly used by the residents. The present objection to the gully is the filthy state in which it is kept owing to the wrong principles upon which the floor is constructed. The floor is invariably of a flat V shape (*see* illustration 4). The syphons being often choked up, the floor runs full of water, and when the street siphon is also choked, as not unfrequently happens, the gully is impassable to any respectable person.

"As to the drainage from privies, the essence of the system I propose is solid permanent construction of an open house drain, which

should never be taken up, which is open to inspection in every part, and which is also open to the atmosphere. There will be a speedy flow of sullage water from the house. The water from a *moree* has a considerable admixture of urine. In a privy it is more concentrated, that is all! Natives always use water in a privy. The use of water should be encouraged by the bath-place or water-room being fixed near the privy. This is in fact done in most new chals. So long then as the Municipality supply deep baskets made of strong cane for the *feces*, I see no reason why the sullage from privy should not be allowed to flow along the open drain under the passage. I am of opinion that such an open drain is in every respect more suitable than a closed pipe, and will cause less nuisance than a sewage pipe with its accompaniments of siphons and ventilating pipes.

"I am of opinion with Dr. Weir that there should be a catch-pit in the gully a few feet from the junction of the gully drain with the sewer pipe under the road. It should be cylindrical or oblong in shape, not less than one foot in diameter, and the floor of the pit should be 1½ feet below the floor of the drain. If oblong, its size might be 9 inches wide by 2 feet long, so as not to cause an eddy in the flow of the water. Such an oblong pit with a curved stone floor could easily be cleaned. The dimensions given are only suggestive. The size of the catch-pit would need to be adapted to the number of houses served by it."

Mr. Gostling; I shall now be glad to answer any question.

Mr. Blaney: Mr. Gostling has omitted to say anything with reference to my question No. 8. "What flushing arrangements would be most effectual for a house drain which you propose"? *A.*—I don't think any flushing arrangements would be necessary; the water continually flowing from the house would be quite sufficient to flush them.

Q.—In your system, should Inspectors of Drains be qualified men? By qualified men I mean able to pass some examination. *A.*—If by qualified men you mean educated men, I say yes; but if you mean men who have passed a Doctor's examination—(Mr. Blaney: "No, no")—certainly the more education they have the better; I believe in education for inspectors just as much as Sir Richard Temple believed in education for *Mamlatdars*, and who considered that B.A.'s should be given the preference. (Laughter.)

Mr. Blaney: I think Mr. Gostling has answered all my questions in the very able paper he has written and put in.

Mr. Gostling: Those questions which I have not answered, I have marked with a pencil on the paper.

Mr. Blaney: Do solids reach the sewers in any other way than through the house drains? *A.*—Yes.

Q.—How? *A.*—Through the ventilating gratings in the streets.

Mr. Muncherjee C. Murzban: You mean the perforated covers of the man-holes? *A.*—Yes.

Mr. Blaney (to Mr. Gostling): If gases escape from the house drains, where two houses are close together will they not ascend and enter the house through the open windows? *A.*—I think I have said that in my notes.

Q.—Here in the Fort we know the houses of Mrs. Lake and Mr. Stoffenauer were constant matters of report? *A.*—I said in my

notes that gases would ascend through the pipes, and I would now add that the remainder of the gas which did not go up the pipes would go in all probability in at house windows.

Mr. Pherozeshah M. Mehta (to Mr. Gostling): You have seen Dr. Weir's model? *A.*—Yes.

Q.—What is the difference between it and what you suggest? *A.*—In Dr. Weir's model the floor is sloping, it should be level from end to end, and laid six inches below the level of the floor of the house so that it may be used as a passage also. The gutters represented here, I think, would choke up almost immediately. I propose to have larger gutters, but the width at the top will be the same. I also propose that the short open grooves on each side should be closed with the exception of a large hole underneath the pipe to start with.

Examination of Mr. Gostling by Mr. Nanabhai N. Katrak.

Q.—Is it practical to do away with the down-take pipe which is always smelling foully and always requires flushing? *A.*—No, you cannot do away with it. I have explained that the substitution of a pipe with a slit will give every ventilation.

Q.—You know the smell is due to some sticky substance on the inside of the pipe; will your ventilation do away with that? *A.*—Entirely, or largely.

Q.—You don't believe that the suggestion to do away with the pipe is practicable? *A.*—They must have pipes.

Q.—Is it possible to so construct the pipes that they may be disconnected and taken down when required? *A.*—No, I don't think it is possible; and if you have a slit, it would not be necessary.

Q.—(Referring to red model.) In the model before us, do you think a grating is necessary at the bottom? *A.*—A grating like that would prevent the sullage getting away.

Q.—There is a catch-pit a few inches away from the pipe, and after the catch-pit has been provided for, do you think that grating is necessary? *A.*—With a catch-pit it is not necessary.

Q.—Will a catch-pit secure all matter thrown into it; some may float? *A.*—A catch-pit could not stop sticks, of course.

Q.—There may be all sorts of floating substances—wood, straw, cork. *A.*—Cork would not choke a pipe; it is the solid matter which settles in the siphons which causes chokes.

Q.—Do iron pipes smell more than earthenware or tile and chunam? *A.*—Iron pipes smell worse than earthenware, and tile worse than both.

Q.—Which do you advocate? *A.*—Iron.

Q.—In spite of their smelling? *A.*—Earthenware would not keep in its place; it is too heavy.

Examination of Mr. Gostling by Mr. Bhalchandra K. Bhatawadekar.

Q.—You have answered all my questions except one. I believe you are acquainted with the customs and habits of the people, particularly of Bombay? *A.*—Practically.

Q.—There was one impression made on my mind by your reply to Dr. Blaney about educated people, that merely passing an examination would not be sufficient? *A.*—My meaning was that I would not restrict inspectors to medical men.

Mr. Pherozeshah M. Mehta: A medical education will not spoil a man?

Examination of Mr. Gostling by Mr. Pherozeshah M. Mehta.

Q.—You have said something about storm-water and the system of dealing with it in Bombay; do I understand you recommend it to be done away with? *A.*—Not in the street sewers, but only as regards house-connections. It is this desire to separate storm-water from sewage which has caused all the complications in the house-connections we are now suffering from; if that idea is given up, I think the drains will work effectually and we shall have no smells.

Examination of Mr. Gostling by Mr. Cowasji Pestonji.

Q.—What is your opinion about the gully traps? Ought they to be done away with? *A.*—Yes.

Q.—In connection with the house drains? *A.*—I suggest that you should do away with your house-connection pipes and have open channels.

Q.—I mean the street drains? *A.*—I have not said anything about them.

Q.—And the running siphon? *A.*—I would put the catch-pit at the street end of the gully, between the running siphon and the gully.

Q.—How would you flush the running siphon; there would be an accumulation there? *A.*—I think the daily water would be amply sufficient.

Q.—If the water running from a house is sufficient to flush the running siphon, I think it is sufficient to flush the other siphons connected with the down-take pipe? *A.*—I propose to do away with siphons altogether with the exception of the running siphon.

Q.—If the water is sufficient to flush the running siphon, will it not flush the siphons connected with the house drains? *A.*—It is not sufficient for that purpose.

Q.—Why? *A.*—Because the ordinary house siphons choke so with ashes and earth.

Q.—In the absence of house siphons and the gully siphon, the running siphon will be choked? *A.*—In the absence of the catch-pit recommended by Dr. Weir and myself, it would choke.

Q.—You mean to say the catch-pit will do away with this nuisance? *A.*—The catch-pit will take all solid matter which chokes the siphon, and the siphon will do its legitimate work of forcing the foul air up the ventilating pipe.

Q.—What about the ventilators attached to the drains? *A.*—I think they are good.

Q.—They are necessary? *A.*—Certainly.

Q.—You could not do away with them? *A.*—The ventilators which ventilate the street sewers?

Mr. Muncherji C. Murzban: Mr. Cowasji speaks of the ventilators to the house drains.

Mr. Gostling: As at present constructed, they are necessary.

Mr. Blaney: For closed drains? *A.*—Yes. With closed pipes you must have the ventilators; with open drains they are unnecessary.

Examination of Mr. Gostling by Mr. Muncherjee C. Murzban.

Q.—Mr. Gostling, you are aware that in Bombay we have a system of sewerage which segregates storm-water from sewage and sullage; if you have these open gullies, will not these open gutters carry a lot of storm-water into the drains? *A.*—I don't think so.

Q.—If these gutters are open and the eaves of the house are in the gullies, it will throw water into the gutters and from there it will find its way into the sewers? *A.*—I don't think there would be any appreciable difference in the quantity of water which would go into the sewer pipes than at present. Practically a large amount of rain does now go in.

Mr. Blaney: Mr. Viegas will tell us how many millions of gallons go in.

Mr. Muncherji C. Murzban (to Mr. Gostling): If millions of gallons now go in, will not more go in under this system and necessitate additional power at Love Grove? *A.*—In any case you must have pumping power to do double work in the monsoon than in the dry weather, and I don't think there would be any practical difference under the circumstances I propose.

Q.—Would not the open gullies be easily accessible to people urinating and defecating? *A.*—Not, if they are closed with a door.

Q.—Under the former arrangements they were closed, but to our knowledge most of these gullies were used for such purposes; will not your arrangement add to that nuisance? *A.*—I don't think so. If a man urinates in a running stream I don't think it matters much, and as to defecating, if the police allow him, then it is their fault.

Examination of Mr. Gostling by Mr. Ardasir D. Mody.

Q.—Do you think the water seal in the gully trap acts? *A.*—It all depends on the depth of the seal.

Q.—Does it depend on the quality of the water? *A.*—Very much of course.

Q.—If it contains sullage water, will it act as a seal? *A.*—My own belief and experience is that it does not act as a seal. So far as the siphons at present fixed in *moree* pipes are concerned, I don't think they do so act.

Q.—And from them there is an escape of gas into the houses? *A.*—Yes.

Q.—And for so many years we have been allowing this escape? *A.*—Yes.

Examination of Mr. Gostling by Mr. Acacio G. Viegas.

What are your objections to the siphon? *A.*—My objection is that they choke up and become worthless, and worse than useless if not kept continually clean.

Q.—Do you consider that the present system is a scientific one; the present system of house-connection? *A.*—I have said in the beginning of my paper that it is anything but a scientific system, simply because I take 'science' to be 'exact knowledge,' and this present system shows a want of exact knowledge of the people. Our drainage should be designed to suit the habits of the people and not the habits of the people to suit the drainage. (Hear, hear.)

Q.—You disapprove of the system, simply because the people urinate and defecate in the *nahanis*? *A.*—That is one reason, but the system is too complicated.

Q.—Secondly, because you think the siphons a source of danger, as they are liable to be choked? *A.*—Yes.

Q.—If we had some arrangement by which we could open the siphon—a nut—and if we could clean the siphon, would your objections, so far as they apply to choking, be removed? *A.*—No; my objections would not be removed. The difficulty is these siphons are hard to get at and likely to be neglected. They are up in the air and need long ladders to clean them, and for that reason they are liable to be neglected.

Q.—Supposing we had the necessary ladders and staff, do you think that these nuts and the cleansing facilities would make the siphon a desirable part of house-connections? *A.*—I think practically they are so complicated as to be objectionable.

Q.—I insist upon my question? *A.*—It is simply a matter of expense.

Q.—I have to tell you that at present we are not considering the question of expense.

Mr. Pherozeshah M. Mehta: I don't think, Mr. Chairman, that we have expurgated that question.

Surgeon-Major Banks: We are to consider what is the best system.

Mr. Pherozeshah M. Mehta: But it would be a waste of our time to consider extravagant systems.

Mr. Viegas continuing (to Mr. Gostling): In case these siphons could be cleansed, would not your objection be removed? *A.*—No, because the siphon contains a collection of dirty water from the *moree*.

Q.—Do you think the water in the siphon is constantly replaced? I mean to say the seal in the siphon is constantly replaced. Why should you, when the siphon is not choked, consider it a source of nuisance? *A.*—It is likely to be a source of nuisance.

Q.—I should like to know your reasons? *A.*—Because it is sullage and not pure water. (Hear, hear.)

Q.—The water in the siphon is continually changed if I do not misunderstand the real condition of the siphon? *A.*—Yes.

Q.—Why should that water be such a great source of danger unless the water is not changed for a number of days? *A.*—I will give one strong reason against it. Before natives go to bed they urinate in the *nahani*, and the siphon is then full of urine for the whole night.

Q.—One question more. Don't you think the time has come when we should make some effort to check this practice of urinating and defecating in a *nahani*? *A.*—I have already said that medical men should advise their patients to go elsewhere.

Mr. Ardasir Mody: How long will it take to educate them?

Mr. Nanabhai Katrak: About three thousand years.

Mr. Gostling: What I have said is that, under the new By-laws, houses will have privies on every floor. In the old days, if a man wished to visit a privy, he had to probably walk into the next street and consequently they more frequently went to the *nahanis*. Now they will only have to go a dozen yards, and it will do away with the necessity of using the *nahanis* for such a wrong and wicked purpose.

Mr. Viegas: But when people come to know all these facts about their wrong habits, will they not change them? *A.*—Yes, educated people will.

Q.—Do you advocate the siphon in the better class of houses? *A.*—I think we are better without them.

Q.—Why? *A.*—Because they breed disease.

Q.—You object to the siphon on account of the habits of the people urinating and defecating in the *nahanis*, but the better class of people don't do that? *A.*—I will give another reason; educated people will not put their hands into a siphon to clean it, English people will. I have done it in England, and it is a part of my business as an architect to try for myself to see why a water-closet, which I had erected, does not work. Educated people in India will not do that.

Mr. Blaney: Mr. Gostling has also said in his report that in English houses in Bombay most of the servants are natives.

Mr. Viegas (to Mr. Gostling): Are you aware that we have a large number of employés who are called "plungers," whose duty it is to keep gully traps clean? *A.*—Yes.

Q.—Supposing we had a similar establishment for cleaning the siphons, which could be kept clean by a nut or some other contrivance, don't you think the siphon system would be better? *A.*—You ask me my opinion. I think we are better without it. I think of the necessity of having gullies kept fresh and clean and free from smells, and I believe the system I have suggested is one which will effect that and not cause disease.

Q.—What were your objections to the older system of channels? *A.*—Because the sullage water flowed down in a sluggish stream on the top of the channel and was obstructed by *kuchra* and became a foul stream full of *kuchra* and mosquitoes.

Q.—How will that be remedied by the open channel system you advocate? *A.*—Because I propose there should be wide open channels under the paving stones, but narrow on the top.

Q.—Then with your system the water will flow underneath? *A.*—Yes, and the paving stones will always be dry and thus free from disease germs

Q.—I am very happy to know that ; that is a great improvement. *A.*—My scheme is practically the same as Dr. Weir's with that exception.

Q.—You say the water will flow underneath ? *A.*—Yes.

Q.—Will not the water which the residents pour into the open channels, together with the refuse of vegetables and *kuchra*, rot there ? *A.*—No, it will remain on the surface of a dry gully.

Q.—But when they put water and *kuchra* down, decomposition commences directly ? *A.*—The water will go through the *kuchra* into the channel below, and the *kuchra* remain on the surface and get dry.

Q.—Will the channel be perforated all along, or how will the water pass into the drain ? *A.*—I have said already that at the top the drain will be open three inches wide, and below the stones it will be a wide drain.

Q.—How will the water from the open channel get into the drain below ? *A.*—It will be as you see it in this model (red) ; there will be grooves on top of the drain. I dare say it is difficult to grasp a thing which has never been done.

Q.—Natives throw water and *kuchra* from the windows on to the pavement beneath. I want to know how the water will separate from the *kuchra*, so that there will be no decomposition ? *A.*—If you fill the gully with *kuchra* on my system, it will remain on the top.

Q.—I say at present these are the habits of the natives ; they throw the vegetable refuse and water on to these open channels ; how will you separate them ? *A.*—What I have been advocating is this, that there should be a drain underneath 6″ wide and not less than 8″ deep. The paving will be at one level all through, the bottom of the drain to be carried on a slope to the street, and reaching a depth of two or three feet at the bottom, and commencing at 8″. These gutters are fed through the three inch slit at the top.

Q.—Supposing *kuchra* falls into the gutters, it will be practically a greater source of nuisance and danger than the siphons, unless you perforate the top of the drain so that water will pass away and the *kuchra* remain dry ? *A.*—Except while being poured on to the gully, it is carried underneath the pavement.

Q.—How is the water got into the gullies ?

Mr. Bhalchandra Bhatawadekar : There is some misunderstanding ; Dr. Viegas is under the belief that the drain is on the top of the pavement.

Mr. Gostling : Dr. Viegas does not understand what I mean.

[With the aid of a sketch the proposal of Mr. Gostling was explained to Mr. Viegas.]

Mr. Viegas : I will ask one question more. Do you think the channels will be a source of danger by reason of decomposition ? *A.*—No, because decomposition will be arrested and the paving stones will be dry.

Q.—Will there be no liability to leakage from the drain ? *A.*—I do not think so. I propose that the bottom and top should be built of solid stone, the sides of brick-work, plastered with cement.

Q.—The bottom of your drain will be made of stone? *A.*—Yes.

Q.—Will not the joints between the stones leak and saturate the surrounding ground? *A.*—The only effect will be that the subsoil water from the house will leak into the drain, and not the sullage into the house.

Q.—Do you think the system you advocate will have to be replaced in the course of ten or fifteen years, or say twenty years, when the habits of the people have improved? *A.*—So long as educated natives refuse to clean siphons with their own hands, so long it will be necessary not to have that system.

Q.—If the Municipality did the work, your objection disappears? *A.*—I don't think so, because when a siphon chokes it has to be cleaned in five minutes, or there is a nuisance.

Q.—The old open paved gullies are a source of danger? *A.*—Undoubtedly.

Q.—Do you think that under your system all this will disappear? *A.*—Largely, I think. I do not say that what I propose is perfection, but I say it will be a great improvement on what we have.

Q.—Excluding the habits of the natives, I understand you to say the present system of house-connections is a most desirable system? *A.*—I cannot as a practical man exclude the habits of the natives; you must work from induction, not deduction. (Hear, hear.)

Q.—That is an admission on your part that barring the habits of the people the present system is the best one? *A.*—The first consideration is to ascertain the habits of the people amongst whom you live and for whom a system of sanitation is required, and having done that you work out the best system to relieve them of the trouble which they feel. There is no absolute truth in sewage questions any more than in other questions. (Hear, hear.)

Q.—Is this system the one in vogue in England? *A.*—I am sorry to say it is not; I wish it were. England, I think, is the worst sewered country in the world. My family were nearly poisoned in a house in London. The system, however, is not suited to India. I would advocate it for use, but you must have intelligent co-operation on the part of the residents. I have been in English houses in Drury Lane, London, where poor people live whose water-closets have been choked for a week inside the house; not outside, as we have them here.

Q.—Have you any objection to the diameter of the pipe now used for house-connections? *A.*—I have no objection to it.

Q.—You think 2½″ ample? *A.*—Not ample, sufficient; 3″ is ample.

Q.—You would not advise the Municipality to substitute a larger pipe? *A.*—What you want is to devise means of preventing *kuchra* getting into the pipes, and having done that they will do their work well.

Q.—Do you think that the larger the surface of pipe, the greater the source of bad smells? *A.*—Yes.

Q.—That is partly why you think 2½″ pipes are sufficient? *A.*—2½″ pipes will take any quantity of water that can possibly be put into a *moree*.

Q.—I wish to be certain that citizens are not unnecessarily alarmed about the present system of house-connections, and without foundation prejudiced against them?

Mr. Blaney: That is not a question.

Mr. Viegas: I have not finished.

Mr. Blaney: It is a political question.

Mr. Viegas: You really believe, Mr. Gostling, that the dangers of the present system are such as warrant on the part of the Municipality the great expenditure which will be necessary to substitute the present house-connection system—do away with them or remove them—in the localities in which they have already been fully established? *A.*—I would answer that in this way. Under the present system the Municipality not unfrequently undermine the foundations of houses. (Hear, hear.) I a short time ago had to inspect a house in Withalwady inhabited by rich people, where the Municipality had excavated their gully pipe six or seven feet below the floor of the house. That was no doubt necessary for the purpose of giving a sufficient fall to a closed pipe, because a closed pipe cannot be cleaned easily, and a choke may not be found out for days and, therefore, a large fall is necessary. In this case I was obliged to advise the rebuilding of the side of the house, as it was shaken from bottom to top, and it was clear that the excavation of the Municipality was the cause of the mischief. That frequently occurs. In the system which I advocate it will never be necessary to carry the drain more than two or three feet below the surface of the ground floor and it can never possibly undermine the house. There is also another reason; a surface drain is so simple it can be cleaned at any time, and men go to see it every day, whilst with a pipe underground it may be breeding disease, and no one knows anything about it until it chokes and refuses to work. Therefore, I say, this system of house-connections fails, because it is unsuited for our present requirements.

Q.—You think the present system is so far faulty that you advise the Corporation to undertake this immense expenditure in order to substitute it by the system you have expounded? *A.*—It will not be an immense expenditure. The only expenditure will be to alter the level of the stone-paving in the gullies; the same stone paving will do; put in a new open drain in masonry, and that is all.

Q.—This immense stock of siphons and other materials will have to be done away with? *A.*—That is expenditure that is finished. I am speaking of further expenditure. The siphons are all good and can be sold.

Mr. Viegas: One more last question.

The President: What, another one, Mr. Viegas?

Mr. Gostling: Let him be; he is asking very sensible questions.

Mr. Viegas: I have one great objection to your system, Mr. Gostling, and that of Dr. Weir. I hold, and will not be surprised ——

Mr. Blaney: Is this a question or a speech?

Mr. Viegas: It requires a little illustration. I have not the power to shape the question so as to include the whole matter. I have a great objection to your system, Mr. Gostling, and that of Dr. Weir, and I shall not be surprised to see or to hear, if we live another 15 years, or say 20, we shall be under the necessity of doing away with it altogether, and the great objection is that you expose——

Mr. Blaney: Where is the question?

Mr. Viegas: I am coming to it.

The President: Go on, Mr. Viegas.

Mr. Viegas: You expose a very great surface for decomposition, Mr. Gostling? *A.*—Excuse me, no.

Q.—I hold that opinion? *A.*—I only expose 3″.

Q.—Over all your drains, it is the same. It will be a source of putrefaction and decomposition, and———

Mr. Pherozeshah M. Mehta: I must object; this is a lecture. We will consider these questions when we sit in consultation. We cannot argue the point now.

Mr. Bhalchandra Bhatawadekar: I think Dr. Viegas might reserve his remarks for a minute.

Mr. Viegas: I think Mr. Gostling such a high authority that I hope he will allow me to satisfy myself on every point which required elucidation.

The President: If you want any new information, Mr. Viegas, you may go on.

Mr. Pherozeshah M. Mehta: All we object to is that Mr. Viegas is endeavouring to enlighten Mr. Gostling on some point.

Mr. Viegas: I am going to be enlightened.

Mr. Blaney: I hope so.

Mr. Viegas: The present house-connection system was introduced to do away with a large surface of decomposed matter, and have all decomposition underneath the ground. I say under your system we again revert to the old system and again subject the city to danger? *A.*—I say the system I am advocating has never been tried in Bombay except in a few instances by enlightened natives who have had the judgment to see how good it is. There is a house in Lohar Chall Street which was surface-drained in this way, and the gully, when I made a survey, was as clean and nice as any one could wish for, and regularly used by the inhabitants as a passage. There are a few other instances in which owners have put in open drains of masonry underneath the pavement. The new house-connection system now adopted has not remedied the old evil of bad smelling swampy gullies, and the reason is that the siphons are so frequently choked that sullage and the contents of privies flow over and into gullies. I went into a gully this week drained on the principle of that in the white model, and I had to pick my way amidst all kind of filth; the running siphon was choked and the sullage garbage had been decomposing for days. So long as there

are standing puddles on the surface of the stones full of urine and stuff from privies, so long will there be decomposition and bad smells during the night. What I propose is to have new drains underneath the paving stones, but always open to inspection. That has only been tried in half-a-dozen instances in Bombay by the good sense of the natives who have hit upon it. In such cases the paving stones remain dry, and there is no product of decomposition or bad smells.

Examination of Mr. Gostling by Mr. Ardasir Mody.

Q.—In a street where there are educated and uneducated people; even if the educated person uses the house-connection in a proper manner, is he in danger from the smells caused by the uneducated people? *A.*—If they will take care to clean the siphons with their own hands, then they will escape.

Q.—If the house-connections are not choked? *A.*—On the assumption they do not choke.

Mr. Blaney: What is meant is that in a tenement house if one-half of the people are ignorant, and the other half use house-connections well; do all suffer alike?

Mr. Gostling: Yes, they all suffer.

Mr. Ardasir Mody: Supposing the houses are side by side and educated people in one house use the connections well and in the other house they are used badly, would the inmates of the first house suffer from the misuse by the inmates of the other? *A.*—Certainly.

Q.—Do you think that it will be necessary to change the present system and in future to adopt the one you propose? *A.*—As a practical man I say the system should be tried, and, if successful, be adopted gradually.

Q.—So the present house-connections may be worked satisfactorily if the people look after them? *A.*—Yes.

Mr. Bhalchandra K. Bhatawadekar: Supposing the house-connections as they are now working cause bad smells to emanate into houses, and there is a danger of the inmates being poisoned, is it not a good reason why people should be alarmed at the system? *A.*—I am alarmed myself. I think the present system shocking.

Q.—Then it does allow the escape of gas? *A.*—Yes.

Examination of Mr. Gostling by the President.

Q.—Will you tell us over what period your experience in building matters in Bombay extends? *A.*—26 years.

Q.—In the course of that period you have had to deal with houses professionally as an Engineer and Architect. *A.*—Yes.

Q.—And in many of these cases you have had to build houses and lay down *nahanis*, *morees*, gullies and house-connections in accordance with the Municipal system? *A.*—Yes.

Q.—And your suggestions are founded on your experience? *A.*—Yes.

Q.—The suggestions you now make have been practically worked out in certain cases. *A.*—I cannot say they have, I am not allowed to do it at present, it must be sanctioned by the Municipality; what I say is that it has been hit upon by natives where the circumstances have been favourable.

Q.—Then in certain cases it has been carried out? *A.*—The natives themselves hit upon the idea, and I have seen where it has been done, to a certain extent but not fully.

Examination of Mr. Gostling by Mr. Cowasji Pestonji.

Q.—Supposing we did away with all the siphons, but had one at the bottom with a lid above or a bolt below so that the siphon might easily be cleaned and the whole of the solid matter allowed to drop out, would that facilitate the cleaning of the siphon, and would the siphon then be useful? *A.*—The siphon can be cleaned under the present arrangements.

Q.—But the siphons on top? *A.*—They cannot.

Mr. Cowasji Pestonji: A plunger is put in, but it is generally left partially choked.

Mr. Pherozesha M. Mehta: But that does not do away with the objection that urine remains in them all night.

Mr. Gostling: Certainly not.

Mr. Cowasji Pestonji: Supposing you have a trap inside the house? *A.*—That is contrary to law.

Q.—But if there was a grating trap with a sponge in, filled with disinfectants? *A.*—Such gratings are used in England.

Q.—Do they minimise the danger? *A.*—I don't think so. If you fill it with urine, where are you.

Mr. Nanabhai Katrak: They still hold to the idea of siphons in England and people are forced to have them? *A.*—Siphons are necessary and desirable in England where insoluble matters are not inserted with the sullage water.

Mr. Blaney: I think we must return our thanks to Mr. Gostling who has given us a great amount of instructive information upon a subject of great importance and interest to the people of Bombay, and is of greater value because Mr. Gostling speaks with 26 years' experience and knows something about other parts of the world. The Committee is extremely indebted to Mr. Gostling, and for myself I heartily say I am thankful to him.

The President: I fully endorse what Dr. Blaney has said.

At this stage Surgeon-Lieut.-Col. Weir said he wished to make a statement.

Mr. Pherozeshah M. Mehta: Having heard the examination of Mr. Gostling by Mr. Viegas, have you anything to say?

Surgeon-Lieut.-Col. Weir: In the first place although you have that system (white model) you must have this system (red), you have it now in operation in Dhobie Talao in order to carry off rain-water, and although you have the white model system you still have leaves and other matter thrown out into the gullies, and, so far as exposure is concerned, it is exactly the same. In regard to the

danger to public health it has occurred to me that there can be no better illustration of the open and closed system than the condition of the human foot in a closed boot and a slipper ; in a closed boot the foot becomes offensive, but in a slipper it is comparatively inoffensive.

Mr. Viegas : But we all the same prefer boots to slippers ?

Surgeon-Lieut.-Col. Weir : It all depends upon the part of the world you are in ; in some places you prefer boots, and in others slippers.

Mr. Pherozeshah M. Mehta : You have heard the modifications made by Mr. Gostling in your design ; have you anything to say with regard to them ? *A.*—I have not carefully considered them. I am not bound to any particular design, but the first condition is simplicity ; if it is not simple and defects in it cannot be easily remedied, I don't care whose proposal it is ; it is wrong.

Mr. Pherozeshah M. Mehta : Will you be good enough to consider the modifications suggested by Mr. Gostling, and let us have your opinion when we next meet ?

Surgeon-Lieut.-Col. Weir : I was asked a question in regard to the procedure adopted by the Municipality where house-connections were obstructed and I gave an opinion, and I was asked upon what authority. A case came up last month which illustrates it. I put in the reply from the Executive Engineer :—

INWARD No. 4392 OF 29*th July* 1892.
No. D 2734 OF 29*th July* 1892.

To THE HEALTH OFFICER.

SIR,—Referring to your No. 10065 of 6th July 1892, I have the honor to state that the drain in question is a private one and Messrs. Kushaba and Abdool Karim have been requested to get it cleaned through the agency of a Licensed Plumber or to deposit Rs. 15 each if they desire that the Municipality should do the work at their risk and expense.—I have, &c.,

C. C. JAMES, A.M.I.C.E.,
Acting Deputy Executive Engineer, Drainage,
for Acting Executive Engineer.

Mr. Ardasir Mody : This was an obstruction of pipes ?

Surgeon-Lieut.-Col. Weir : Yes, and traps.

Mr. Ardasir Mody : Is it a general rule or the exception ?

Surgeon-Lieut.-Col. Weir : It is the general rule with regard to private house-connections.

Mr. Pherozeshah M. Mehta : This is in reference to my question ?

Surgeon-Lieut.-Col. Weir : Yes, and of the traps.

Mr. Ardasir Mody : Is this in a street where house-connections have been made, or where there are no house-connections ?

Surgeon-Lieut.-Col. Weir : It is in DeLisle Road, where 29 traps are blocked ; it is a house-connection made by the owner.

Mr. Pherozeshah M. Mehta : I don't know whether you have asked Mr. Smith to get the department to prepare a table of obstructions reported to it ?

Mr. Smith : I have a file.

Mr. Pherozeshah M. Mehta: We should like to have a table. Will you kindly ask, Mr. Chairman, that a table should be prepared on behalf of the Committee?

The President: Will you please furnish this table, Mr. Smith?

Mr. Smith: Yes.

Surgeon-Lieut.-Col. Weir: With regard to Mr. Smith's, proposals, one is a great improvement on the present system; in principle it is very much the same as this (red model), but it is not so well adapted to the houses of the poorer classes as this. The other proposal I do not quite approve of. There is a catch-pit in the room.

Mr. Pherozeshah M. Mehta: Don't you think that when we took up the present system it was too inelastic; one system was adopted everywhere.

Surgeon-Lieut.-Col. Weir: That was a mistake. One other point with regard to the expense of undoing what the Municipality has done. There need not be any apprehension, because you will remember that the house-connections consist of iron pipes and earthenware pipes. The iron pipes last 5 years, or, as some authorities say, 7 years, but this is where night-soil does not pass through them, and in the case of earthenware pipes they get broken quickly; so you must calculate on a renewal of your system every 7 years.

Mr. Blaney: We know that the Dhobie Talao system was soon knocked to pieces?

Mr. Ardasir Mody: I would point out that the Health Department as well as the Drainage Department received notices about choking?

Surgeon-Lieut.-Col. Weir: There are complaints, but sometimes they are verbal and sometimes written; most of them go to the Engineering Department.

Mr. Nanabhai Katrak: When the new model of house-connections was adapted by the Municipality, did you approve of it?

Surgeon-Lieut.-Col. Weir: I have answered that question.

Mr. Pherozeshah M. Mehta: What does it matter whether he did or not; we are not here to cast blame on any one.

Mr. Blaney: One point, Dr. Weir. You say that the Engineering Department gets certain information which they tabulate regularly about the stoppage of house-connections, your department also gets, and gets them in much more serious cases; you remember that in the lane opposite Sir Mungaldass Nathubhoy's house a pipe overflowed and filled the whole district with sullage; there the choking began in a house-connection?

Surgeon-Lieut.-Col. Weir: Yes.

Mr. Blaney: The whole place was filled with sullage?

Surgeon-Lieut.-Col. Weir: Yes.

Mr. Blaney: Sometimes it is a tremendous affair.

At this stage the Committee adjourned until Tuesday, the 16th August.

BOMBAY, 16*th August* 1892.

AT the meeting of the Committee held this day, there were present:—

Javerilal U. Yajnik, Esq., *President*; Ardasir D. Mody, Esq.; Brigade-Surgeon-Lieut.-Col. S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; D. A. DeMonte, Esq., M.D.; Kaikhosro N. Kabraji, Esq.; Meherjibhai R. Setna, Esq.; Muncherji C. Murzban, Esq., C.I.E.; Nanabhai N. Katrak, Esq.; Pherozeshah M. Mehta, Esq.; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissioner; the Acting Executive Engineer; the Health Officer; and the Secretary.

The minutes of the meeting held on the 9th instant were signed.

The following letter was read:—

BOMBAY, 1, HUMMUM STREET,
16*th August* 1892.

TO THE CHAIRMAN AND MEMBERS OF THE SUB-COMMITTEE OF THE MUNICIPAL CORPORATION considering the Drainage System of Bombay.

GENTLEMEN,—I have the honor to state that I have followed the proceedings before you respecting the Drainage System of Bombay, and believe my experience on the subject may be of service to you.

I do not agree with Dr. Weir and Mr. Gostling that there should be a catch-pit at the end of the gully at the junction of the sewer, as this would not prevent sewer gas escaping at this point flowing up the gully and into the house on either side.

I would advise that to every house there be an air-shaft 3″ × 3″ next to the privy to be carried up to the highest part of the house or adjoining building open to the sky and with no openings therein with the exception of a small door at the base leading from the sweeper's passage. At the bottom of this air-shaft there should be a catch-pit into which the whole of the sullage from the house should flow. The heavy suspended matter would fall to the bottom of the catch-pit, the sullage would flow out 1′ 6″ from the bottom by a 6″ stone pipe connected direct to the sewer.

By this means no siphon trap is necessary, the air-shaft acts as a ventilator to the sewer and effectually prevents sewer gas from flowing into the houses, the deposit of silt could be removed from the bottom of the air-shaft, and during this process the pipe connection to the sewer could be closed, so that the man clearing the same would not come in contact with sewer gas. This plan would necessitate the gullies having a gradient, say 1 in 80, not as at present towards the street, but to the back of the house to the air-shaft. This arrangement could be carried out under the Municipal Act and By-Laws as they now stand.

There is a further and more difficult consideration which does not appear to have been fully before you, *viz.*, the generation of gas in the sewers. You have this important fact on the Municipal records, that no explosion of sewer gas ever took place before the admission of night-soil into the drains.

The silt in the sewers retains the night-soil for days, weeks, and months, when it generates most deadly gases ; otherwise it would flow quite fresh to Worlee in a few hours.

I would advise that the night-soil be carried to the pumping station distinct and free from sullage containing sand and ash ; this can readily be done, as from my experience nothing but night-soil passes into a privy ; the habits of the people which require sand and ash to pass away from every *nahani* exclude it from the same.

The present sewers should be used solely for sullage and any storm-water that may flow from the gullies. The sewers should be provided with man-holes 50 ft. apart; they should be ventilated by every house air-shaft. The bottom of the man-hole should be at a lower level than the sewers to collect silt.

The night-soil should be carried to Worlee by large stoneware pipes or drains built with vitrified brick in cement; the present materials used are from my personal experience perfectly unfit for the carriage of night-soil. As an instance I would point out that the bricks used in the drains are so porous as to absorb 25¼ per cent. of their weight of water. Mr. Baldwin Latham (page 58, Sanitation of Bombay) states that bricks for drainage should absorb less than 12 per cent. of water. The vitrified blue brick I produced before Mr. Grant, Municipal Commissisoner, only absorbs 2 per cent. At present the Municipality are supplying 10 laks of gallons of water free to Her Majesty's Mint on account of leakage from the Mint tank into the drains ; value Rs. 500 per annum.

I shall be happy to be examined by your Committee or give you any further information or plans you may require.

In conclusion, I submit that the separation of the night-soil from the sullage, heavily charged with sand and ash, is the only means by which you can secure the successful working of the drainage of Bombay.

I have, &c.,
JOHN HEWSON, A.M.I.C.E., M.S.A.

Mr. Blaney : Mr. Hewson was one of our Engineers for six or seven years and was in charge of our Panwell Brickworks and also did duty in the Municipal Office in the Building and other Departments. He left our service and became an Associated Member of Civil Engineers immediately afterwards and started practice in Bombay, and has been ever since, that is 16 or 18 years ago. He has had all that experience.

Mr. Kaikhosro Kabraji : But our sewerage is only constructed for sullage water ; we had better inform him of that fact.

Mr. Muncherji Murzban : Are we so positive that our sewers are only for sullage ?

Mr. Kaikhosro Kabraji : That is what I think.

Mr. Muncherji Murzban : I think it is a question whether they are not intended to carry sewage. Technically, sewage means sullage and night-soil.

Mr. Blaney : I think we might put this question to ourselves ; what is the record of the Corporation ? Every time the question was brought up, the Corporation said, " No, no ; let us have Tansa water before you put night-soil into the sewers." Anything that

has been done in opposition to the resolution of the Corporation has been done on their own hook by certain officials.

Mr. Kaikhosro Kabraji: My impression is that it was first intended that the sewers should be constructed to carry night-soil as well as sullage. But after Mr. Ollivant went to England, it was resolved by the Corporation that nothing but sullage should be carried by our drainage system, and the drains and sewers were afterwards built and modified with that intention.

Mr. Pherozeshah Mehta: If night-soil is now put into the sewers, it is done against the orders of the Corporation. You will remember, Mr. Murzban, that it was a mistake in thinking there were any privy connections.

Mr. Muncherji Murzban: There are privy connections.

Mr. Pherozeshah Mehta: I am not talking of large new buildings like the Law Courts, but with regard to the native town. It was distinctly resolved that privy connections were not to be undertaken, and Mr. Ollivant said it was a wise resolution as there was not sufficient water for flushing. I would like to examine Mr. Smith on this point.

Mr. Smith: We have not carried out any privy connections whatever.

Mr. Kaikhosro Kabraji: I think Mr. Howson ought to be called.

Mr. Blaney: Why should he not?

Mr. Pherozeshah Mehta: We shall be happy to hear him if he has anything to say.

The President: The Secretary will then inform Mr. Howson that we will be happy to hear him, and that we will intimate the day later on.

Examination of Surgeon-Lieut.-Col. Weir by Mr. Blaney.

Q.—Do you know a building, the property of the Hon'ble Mr. Telang, in Mandavie? *A.*—Yes.

Q.—Has it house-connections? *A.*—Yes, it is a large building with four storeys with house-connections.

Q.—Are they often obstructed? *A.*—Very often; they have been obstructed five or six days out of seven.

Q.—Has there been a good deal of correspondence about chokings? *A.*—Yes.

Q.—Has there been any improvement in the drainage of that house, or is it still in a bad state? *A.*—There has been no improvement; it has rather a tendency towards obstruction.

Q.—Can you give us some idea of the number of persons living in it? *A.*—It is a large house and there are some hundreds of people.

Q.—Do you know whether the house-connections in Calcutta have been carried out by pipes? *A.*—My information with regard to Calcutta is what I read, and my impression is that house-connections have not been carried out with pipes.

Q.—What is the system? *A.*—I understand that they have so far adopted open gullies.

Q.—Do you think it would be any benefit to us if you examined the system, not only in Calcutta, but the system in Rangoon, which has been talked of so much? *A.*—I think it would.

Q.—Have you been receiving complaints about the obstruction of house-connections in chawls near a school in Haines Road? *A.*—I have received complaints from the Secretary of the Joint Schools Committee with regard to a chawl.

Q.—Did you verify that complaint, or was it a complaint that ought not to have been made? *A.*—The complaint was in reference to connections obstructed.

Q.—Were they recently obstructed or for some time? *A.*—For some time.

Q.—The Secretary was quite right in making the complaint? *A.*—Yes.

Examination of Surgeon-Lieut.-Col. Weir by Mr. Muncherji C. Murzban.

Q.—You seem to object to the existence of traps in *nahanis* because they are frequently choked; is that your only objection? *A.*—That is my chief objection.

Q.—Wall siphons have been done away with because they give trouble by chokage, and Mr. Smith has informed us that the smells now perceived in many of the living rooms are from the foulness of the untrapped down-take pipes; which of the two evils would you prefer—the chokage in the traps or the smells in the rooms from the down-take pipes? *A.*—If I am to prefer either, I would prefer the single smell to the double. I would prefer the smell from the pipe.

Q.—And do away with the trap? *A.*—Instead of the word "prefer," I would say it is more "advisable" not to have the siphons.

Q.—You would do away with the siphon and have the evil smells from the down-take pipe in the rooms? *A.*—I would not put my reply in that way. I would say that the danger from foulness in a pipe is much less than the danger from foulness in a trap.

Q.—Dou you know how much water a trap contains? *A.*—I could not tell exactly, but it is not much.

Q.—I suppose you would not be surprised if it were not more than a gallon? *A.*—Probably less.

Q.—And a gallon is three or four *lotas*? *A.*—Yes.

Q.—And by putting that amount of water into the trap you could keep it clean? *A.*—If it was perfectly clean water and a perfectly clean pipe, then you could keep it clean.

Q.—We will assume that the trap is in working order and will prevent any smells? *A.*—If the pipe is foul, you must have a foul trap.

Q.—The trap is there with a view to preventing danger from the foulness of the pipe? *A.*—The trap is a mere curved pipe, and all bends are more liable to fouling.

Mr. Pherozeshah Mehta: If Dr. Weir's opinion takes one form, Mr. Murzban must accept it; he cannot argue with him and make him accept another.

Mr. Muncherji Murzban: I am endeavouring to get at Dr. Weir's opinion.

Mr. Nanabhai Katrak: These questions have already been answered by Dr. Weir very fully.

Mr. Muncherji Murzban: I think mine are different questions, and I wish to make certain that Dr. Weir understands me. What I say is that wall traps are placed there for the purpose of preventing the foulness of the down-take pipes entering into rooms. I will repeat my question.

Q.—Taking it for granted that a trap is in working order, could it not be carefully cleaned by putting two or three *lotas* of water into it? *A.*—It could not.

Q.—I see you propose in your model a down-take pipe from the *nahani*, a horizontal open channel in the gully and a catch-pit at the down end of the channel, and no trap whatever; will not this arrangement admit of sewer gases getting into the open gullies and entering the open windows in the gullies? *A.*—It would, assuming that the sewers were imperfectly ventilated. My assumption is that it will rapidly and innocuously carry away the sewage.

Q.—Assuming it is not, for sewers are never so practically clean as you suppose? *A.*—I assume that they are fairly well ventilated. My recommendation is on the basis that the utmost amount of ventilation and flushing will be given to sewers.

Q.—You apprehend no danger then? *A.*—Not with well ventilated sewers.

Q.—Instead of having open channels in the gullies, how would it be if a small open channel about 2 feet in length were left between the end of the down-take pipe and the inlet of the horizontal pipe in the gully, the inlet being secured by means of a grating so that the Kutchra brought down the pipe might be left in the channel and be removed by hand? *A.*—I could not answer that off-hand, but it seems to be something like Mr. Smith's proposal; if it is the same proposal, my reply will be the same, that I do not think that it is so simple as mine, but it would be better for chawls than the present system.

Q.—The principal objection to wall traps is that they are not easily accessible. Supposing we had your gully trap in the *nahanis* themselves so that they might be easily cleaned when choked, would there be any objection? *A.*—My principal objection is with regard to the *nahanis*, that the traps are practically urinals or latrines according to the purpose for which the *moree* is used.

Q.—Supposing, if we insist upon having gully traps at the ground level, we had traps generally known as Dean's traps with moveable buckets as shown in this sketch, would you still object to the traps? *A.*—That is practically converting the trap into a catch-pit.

Q.—With this exception, that the catch-pit does not prevent the gas from escaping as the trap does; with Dean's trap you lift up the bucket and take away the solid matters? *A.*—It is an advantage having a bucket, but my idea is that the bucket would be stolen.

Q.—That could easily be stopped by having a few people punished? *A.*—I don't think so.

Q.—Then the pipes may be robbed? *A.*—The gratings are stolen.

Q.—But you can have a hinge on them? *A.*—But they may be broken off.

Q.—If you go on at that rate, you will make no improvements? *A.*—You will have no improvements if you have anything of value which may be taken away and sold.

Q.—Are not cemented channels liable to be continually cut up and thus retain foul water in them and become a nuisance? Will not the catch-pits which you recommend become the abodes of rats and cockroaches and other vermin? *A.*—With regard to the first, no; and as to the second, it is the same with everything that carries dirt.

Q.—In a greater or lesser degree? *A.*—Yes.

Q.—But in this case? *A.*—They would be occupied just the same as sewers.

Q.—Like other bodies air follows the line of least resistance; in the new system of house connection, ventilating pipes being provided at the up and down ends of the drains, do you think that air would force itself through the traps instead of taking the line of least resistance and passing through the ventilating pipes? *A.*—Not generally.

Q.—Would you specify in the cases in which it would not? *A.*—I would rather not extend my answer.

Q.—Would you mind explaining how you would carry the drainage by means of open channels from the *nahanis* of rooms in buildings which have no side gullies? *A.*—That was a question put to me by Dr. Blancy and it is a difficult one to answer; the only thing that could be done is to have gullies at the back, and then you must have a drain through the house just as now in many houses in the Fort.

Q.—You have complained of the gully traps being used as urinals; now will not the cemented channels be used extensively both for micturition and defecation both by the occupants of houses and by people passing by, thus adding considerably to the nuisance complained of? *A.*—I don't complain of the traps being used as urinals; I complain of urine finding its way to traps underneath *morees*.

Q.—I thought you complained of the traps being used as urinals? *A.*—No, not to any extent.

Q.—Will not the channels be extensively used for urinating and defecating purposes? *A.*—Not extensively; people prefer the open gullies to an opening such as a trap.

Q.—The open channels I mean? *A.*—Undoubtedly, they will be used.

Q.—In many houses the eaves of the roofs fall towards the gullies ; will not the open channels you propose bring large quantities of rain water into the sewers instead of it passing into the storm-water drains and thus necessitate larger pumping power in the rains? *A.*—It must be obviated by so constructing the catch-pits at the end that it would not come in.

The Commissioner : By jump-weirs. We cannot have it all come into Love Grove, because the drains are not large enough to carry it.

Mr. Muncherji Murzban's examination being concluded, the President asked the Commissioner if he had anything further to ask Mr. Weir.

The Commissioner : I think not ; I have already asked a lot of questions, and Dr. Weir's opinion is sufficiently on record.

Examination of Surgeon-Lieut.-Col. Weir by Mr. Bhalchandra K. Bhatawadekar.

Q.—You said in reply to the Commissioner's questions that flushing would remove nuisances (page 97, Q. 5). What I wish to ask is, will this flushing remove the smells from the down-take pipes, which are so much complained of?

The Commissioner : My question was directed simply to enquire whether, if you had an automatic flusher, you could not ensure an amount of clean water in the gully.

Mr. Bhalchandra Bhatawadekar : I thought it was with reference to the down-take pipes. Dr. Weir, you don't attribute the increase in mortality to house-connections ? *A.*—No.

Q.—You said on a previous occasion in reply to me that you were not prepared to say anything definite in the absence of facts ?

The Commissioner : I did not take Dr. Weir's answer to mean that he did not attribute any increase to house-connections, but that he would not give an opinion one way or the other.

Mr. Bhalchandra Bhatawadekar : You said to me, Dr. Weir, that you were not prepared to give a definite answer ? *A.*—Both answers are prefectly consistent.

Q.—The reply you gave to me was rather a hesitating one, while the one you gave to the Commissioner is a definite one ? *A.*—You will see that I have stated frequently that neither the house-connection system nor the drainage has been carried out sufficiently to allow any definite opinion to be formed. The Commissioner asked me a definite question as to whether I did attribute an injury which could not be estimated ; I do not.

Q.—The danger to public health in the house-connections is from smells and sewer gases ? *A.*—It is the danger from obstructed house-connections.

Q.—The entrance of gases into houses ? *A.*—Yes.

Q.—Would open gullies minimise the danger to a certain extent ? *A.*—I think so.

Q.—In London you say there were smells everywhere; are they due to house-connections? *A.*—That I cannot say positively, but there were certainly smells inside latrines and they are a portion of the system.

Examination of Surgeon-Lieut.-Col. Weir by Mr. Nanabhai N. Katrak.

Q.—With regard to flushing; what kind of flushing do you recommend intermittent or continuous? *A.*—That is a question of detail.

Q.—Upon that depends the efficacy of the flushing; if you flush once a day, do you think it would be of any good? *A.*—The more frequent the flushing, the greater the effect.

Q.—Could more frequent flushing be managed? *A.*—Certainly, it may be an automatic flushing as frequently as the tank fills.

Q.—What produces sewer gas in sewers; it is due to the decomposition of substances in solution, suspended in the liquid portion and the solids? *A.*—That may be.

Q.—And they are liberated at times owing to certain changes in temperature or pressure? *A*—These are elementary facts.

Q.—And these gases may escape? *A.*—They may.

Q.—It is as likely to escape from the water in the trap under certain conditions of temperature and pressure? *A.*—It may.

Q.—What is the temperature in the sewers; higher than the temperature outside. You have taken certain rates of temperature? *A.*—It may or may not.

Q.—When do you expect them to be lower? *A.*—I cannot answer that.

Q.—You answered these questions during the last Drainage Commission? *A.*—I have not gone over the evidence for many years.

Q.— It may be less sometimes? *A.*—Yes.

Q.—I will draw your attention to the extract from Mr. Baldwin Latham's report put in by the Engineer on page 66. There are certain statements made in that; are they matters of fact or opinion? *A.*—I think anything coming from Mr. Latham must be facts.

Mr. Pherozeshah Mehta: But if he gives an opinion it is an opinion, and if he states a fact it is a fact.

Mr. Nanabhai Katrak: In reply to Mr. Blaney and Mr. Bhalchandra you said that the larger the pipe the better? *A.*—Yes, up to a certain diameter.

Q.—They have fixed it at 6 inches? *A.*—Yes.

Q.—In a similar reply to my question you say that you don't think a larger pipe than 4 inches is advisable. Which should stand on the record? *A.*—I must refer to the question. It ought to be 6 inches.

Q.—You wish to put it on record as 6 inches? *A.*—Yes.

Q.—Mr. Murzban says that the people foul the open channels.

Mr. Muncherji Murzban: I never said that; what I said was that if they existed, would they not foul them?

Mr. Muncherji Murzban: I have one or two questions to ask arising out of Mr. Katrak's examination.

Mr. Pherozeshah Mehta: I think we ought to have some rule about re-examination; if every member is going to re-examine a witness on another member's examination, the matter will be interminable. I think the rule ought to be that a member should have one opportunity of examining and then a subsequent one for the purpose of clearing up any point.

The President: I have already given you, Mr. Murzban, two opportunities and will again give you another.

Mr. Muncherji Murzban: If it is so reluctantly given, I do not wish to accept it; what I wanted to do is to examine Dr. Weir on points arising out of Dr. Katrak's examination, and I think it is only right that I should have the opportunity; however, I will not press the matter.

The Commissioner: Is there to be any rule in future as to the number of times a member shall examine a witness? I did not examine Dr. Weir again, because I did not wish to be guilty of an irregularity.

Mr. Blaney: I don't think there can be any fixed rule, as some members may be able, after the first examination, to bring up a vital point.

Mr. Pherozeshah Mehta: The Municipal Commissioner was asked to examine a second time, but did not.

The Commissioner: I did not commit myself to the irregularity, and I think nine-tenths of the questions asked since I examined Dr. Weir have been superfluous.

Mr. Pherozeshah Mehta: But it was your intention to examine him?

The Commissioner: Yes, but I gave it up, because it seems that the examinations are interminable.

Mr. Blaney: I don't think the Commissioner would have given them up if they had been good questions; when we come to make our report it will be unsatisfactory to have the knowledge that the Commissioner's examination was incomplete.

The Commissioner: I shall make no complaint of that sort.

Mr. Blaney: We shall feel that our hands are not quite free.

The Commissioner: I don't think so.

Mr. Blaney: This is such a great question that we cannot too thoroughly thrash it out.

Mr. Pherozeshah Mehta: I hope you will allow me to explain: you cannot have a fixed rule on Committees of this kind, but at the same time for practical purposes it is a good rule to observe that when you take up an examination you must ask all the questions. Of course, it may happen that in the course of discussion some point may turn up, which needs elucidation, and it may be desirable for a member to re-examine a witness, but that should be at the discretion of the Chairman: that is the proper rule on Committees.

Mr. Muncherji Murzban: I have only had one opportunity of examining Dr. Weir. I was absent on the second occasion.

Mr. Pherozeshah Mehta: Mr. Murzban forgets that on the last occasion he was present and Dr. Weir was examined.

Mr. Muncherji Murzban: No, Mr. Gostling was examined.

Mr. Pherozeshah Mehta: Also Dr. Weir.

Mr. Blaney: I don't think Mr. Murzban should be allowed to go out of the room with a grievance.

Mr. Muncherji Murzban: I have none; I only wanted to clear up a point with regard to the action of the traps.

The President: I have given every member an opportunity of examining witnesses once, and if any important truth has had to be elucidated I have given opportunities for it.

Mr. Muncherji Murzban: You have allowed members to examine three or four times, and if I have any grievance it is that this should have been done. I only wanted to ask two or three further questions and was ruled out of order.

Mr. Pherozeshah Mehta: No, what Mr. Murzban asked to do was to re-examine with regard to questions asked by Mr. Katrak, and it is not desirable that one member should re-examine on the examination of another.

The Commissioner: Every question of Dr. Katrak and Dr. Bhalchandra was on my cross-examination of Dr. Weir; Mr. Murzban has only been allowed one examination.

Mr. Pherozeshah Mehta: I think Mr. Murzban ought to be pressed to put his questions.

Mr. Muncherji Murzban then proceeded: Are you aware that in Europe some useful experiments have been made on the action of traps? *A.*—Yes.

Q.—And you know the result has been that when air does pass through the water seal it passes after a considerable time 2 to 4 hours, and then it changes its original character? *A.*—Yes.

Q.—It becomes innocuous to a certain extent? *A.*—Will you continue the question before I reply.

Q.—It takes 3 or 4 hours for the air to pass? *A.*—It depends on conditions.

Q.—And when it passes it becomes innocuous? *A.*—That is the result of the experiments.

Q.—I know these experiments have taken place, but I cannot lay my hands on the report of the proceedings. I ask Dr. Weir if he remembers that, when gas passes through the trap, it becomes harmless? *A.*—My recollection of the experiments are somewhat the same as yours?

Mr. Blaney: Were the experiments in summer or winter, or in hard or soft water?

Mr. Muncherji Murzban: If you ask me as a witness, I will answer.

Mr. Pherozesha Mehta: I think the text book ought to be produced.

Mr. Muncherji Murzban: I will produce it, if I lay my hand on it.

Mr. Pherozeshah Mehta : I think the President should ask the question if the Commissioner has anything more to ask Dr. Weir.

The Commissioner : If I begin, every member of the Committee would want to ask half a dozen questions.

Mr. Pherozeshah Mehta : I think he should be asked if he has anything further.

Re-examination of Mr. Smith by Mr. Pherozeshah M. Mehta.

Q.—Have any privy connections been made in the City ? *A.*—Yes.

Q.—Where ? *A.*—Several in the Fort and the experimental closets in Kamatipura ; there is also a public latrine near Byculla Bridge and another in Falkland Road.

Q.—I am not talking of public latrines ? *A.*—I think it will simplify matters if I state that for the past seven years nearly the whole of the night-soil has passed through the new sewers.

Q.—Yes, I know that it may be put in at certain depôts. But are there any privy connections to houses carrying night-soil to the drains, and is it largely done ? *A.*—Not largely, I cannot give the numbers ; whenever house-holders have wished to make a water-closet we have allowed it, and the Municipal Act of 1888 makes special provisions under which they can be carried out as distinct from privies.

Q.—Can you give me an idea ; how many houses in the City are connected in this way ? *A.*—I am afraid I cannot.

Q.—Some general idea ? *A.*—I daresay not a hundred.

Mr. Kaikhosro Kabraji : All over the native town ?

Mr. Smith : All over Bombay.

Mr. Pherozeshah Mehta : Are these hundred privy connections given to new or old houses ? *A.*—In some cases new and some old ; in Elphinstone Circle there are a great many, and they are old houses.

Q.—Most made before the present Act or after ? *A.*—Those in Elphinstone Circle before.

Q.—Have the majority been made before or after ? *A.*—I should think since the passing of the Act.

Q.—Is it understood now whenever a privy connection—I use the word *privy* ? *A.*—The Municipal Act makes a distinction.

Q.—What is it ? *A.*—A separate set of conditions for water-closets and privies.

Q.—How do you distinguish them ? *A.*—In a water-closet the night-soil is carried by a flush of water direct into the house drain and the sewer ; in the case of a privy the night-soil is for the most part collected in a basket.

Q.—A privy is a place where night-soil is deposited, and it may be carried away in a basket or put into the sewers by means of a pipe ; that I call a connection; one is a manual service and the other an automatic service ; the word I say is perfectly the same ; it remains a privy and I prefer to use it, because it is the word

used in all the literature of the Corporation on this question; what I want to know is, is it a rule in your Department that these connections for carrying night-soil from houses straight into the sewer are to be granted when asked for? *A.*—Yes.

Q.—Under that rule many connections have been asked for and granted? *A.*—You can scarcely call it many; I think I am overstating it when I say one hundred.

Q.—Are you aware that, when house-connections were sanctioned, the question of privy connections was kept over? *A.*—Yes.

Q.—And are you aware that night-soil was not to be put into the sewers until the Commissioner had made a report to the Corporation on certain experiments? *A.*—Yes.

Q.—Do you know that the report has never been made? *A.*—I do not.

Q.—Has it been made? *A.*—I think so.

Q.—By whom? *A.*—By the Commissioner.

Q.—Has the Corporation passed any resolution on the report? *A.*—I am not aware of it.

Q.—Are you aware that, when Mr. Ollivant was Commissioner, he stated that until Tansa water was brought into the City it would not be safe to put night-soil into the drains? *A.*—I don't know that.

Q.—Were you of that opinion at any time? *A.*—It was scarcely sufficient for such a system.

Q.—Then, you were of opinion that until sufficient water was brought into the City, it was not safe to put night-soil into the drains? *A.*—Yes, as a general system.

Q.—Can you tell me whether you expect sufficient water from Tansa to flush the drains? *A.*—Oh, yes.

Q.—How have you formed that opinion? Is it your own or formed in consultation with the Water Engineer? *A.*—Yes, and with my knowledge of the quantity of water brought in.

Q.—Do you think it is sufficient for flushing purposes? *A.*—Yes.

Q.—You have no idea that the Municipal authorities are rather doubtful about that now? *A.*—I have heard that.

Q.—About the model of the existing house-connections? The siphons are outside the wall. When it is obstructed, who is expected to see to its being set right? *A.*—In houses and districts which have been connected at Municipal expense we have a Municipal staff and we clear them.

Q.—What has a house-holder to do? How does the whole thing proceed? *A.*—If it should be neglected by the staff——

Q.—But how is the house-holder expected to proceed? *A.*—He will see the members of the staff going round to inspect the house gullies and he will call their attention to it, but generally it is attended to in the ordinary course.

Q.—Have you received complaints direct about house-connections. *A.*—Yes.

Q.—How is it that, if they should communicate to the people who clean them, they come direct to you? *A.*—They have chosen that particular course.

Q.—And suffer the nuisance instead of applying to the men? *A.*—Some people don't know how they are looked after.

Q.—What do the men do? Visit a house every day? *A.*—Nearly every day.

Q.—What is the staff? *A.*—I have put that in with a statement giving details.

Q.—As a matter of fact, is every house visited every day by one member of the staff? *A.*—As a rule.

Q.—Then, how is it people come to you direct when there is a man available? *A.*—All I can say is, they choose that course.

Q.—It is the simple "cussedness" of the people? *A.*—Very likely.

Q.—The siphon is outside the house; how does the staff see to it? *A.*—If it is high up, they use a ladder.

Q.—But how do they get at the connection inside the *moree*? *A.*—The pipe inside is never choked.

Q.—How do they get at the siphon? *A.*—They put their hand or a plunger in.

Q.—Supposing something is sticking in the bend? *A.*—Water is forced through it; it must be very solid if it resists the plunger.

Q.—Supposing something is sticking to the side of the bend, and is so hard that water will not clear it away? *A.*—In that case the whole of the bend would have to be taken down.

Q.—Are house-holders allowed to set right the obstructions themselves? *A.*—Certainly.

Q.—In many cases do they do it themselves or wait for the Municipal man? I am speaking of districts in which house-connections have been carried out by the Municipality. *A.*—I am not referring to any other part.

Q.—Can you give us any general idea of what it costs? *A.*—It is down in the statement.

Q.—The cost is Rs. 1,221 per month. Is the staff sufficient? *A.*—I have said the staff is doing its work fairly, but I shoud like it to be slightly increased.

Q.—By how many? *A.*—I could not state that without going into the question of the number of gully traps and the number that can be cleaned by men.

Re-examination of Mr. James W. Smith by Mr. Kaikhosro N. Kabraji.

Q.—You say about 100 houses have water-closets? *A.*—Yes.

Q.—Does that include buildings like the High Court? *A.*—Yes.

Q.—Then private houses in the native town must be much less than 100? *A.*—Yes.

Q.—Since they are allowed to have privy connections, can you account for the fact that they do not apply for the system generally? *A.*—The cost deters them.

Q.—Are people disinclined to adopt the system?

Mr. Nanabhai Katrak: Perhaps it is not generally known.

Mr. Kaikhosro Kabraji (to Mr. Smith): Do you know that, when Mr. Ollivant returned from England, he reported to the Corporation that he had studied the house-connections in England, and was of opinion that night-soil ought not to be carried into the sewers, and that at that time there was some modification made in the system of sewer pipes? The drains were constructed only with a view to carry sullage? *A.*—The sewers from the very first have been constructed with sufficient capacity for night-soil.

Q.—But after a certain time when it was said the system would not be advisable for Bombay, they were somewhat modified? *A.*—There has been no such modification.

Mr. Cowasji Pestonji: May I ask a question of Dr. Weir?

The President: I think not.

Mr. Viegas: I think the request of Dr. Cowasji a reasonable one.

The President: I have already ruled on the point.

Mr. Viegas: Is this the last meeting of the Committee?

The Commissioner: You had better ask that question this time next year.

Mr. Viegas: What I wish to say is that I have not asked a single question of Mr. Smith or Dr. Weir, and I should like to examine them after having heard all the witnesses in this case. The object of this Committee, I take it, is to arrive at a satisfactory conclusion, and unless we study the whole of the evidence which may be given, I cannot ask a question of these two gentlemen. I did ask questions of Mr. Gostling last time, because he is not always available.

Mr. Ardasir Mody: If a member comes late, he must suffer.

Mr. Pherozeshah Mehta: I have one strong objection; if Mr. Viegas thinks that he can reserve his examination until others have done, other members may think the same and reserve themselves and have witnesses recalled for their special benefit. A member should ask all questions he may have to ask at the time the witness is present, and if anything of a special nature subsequently transpires, a witness may be called a second time. But that there should be a postponement, such as Mr. Viegas suggests, is a procedure which the Committee cannot countenance.

Mr. Viegas: I would like to say one word to Mr. Mehta in answer to what he has said. If I wish to reserve my examination for a later period, it is because I think I cannot understand the whole question until the whole of the valuable evidence is taken.

The President: Every one might say that. I cannot allow any such course.

The Commissioner: Let us all reserve our questions. (Laughter.)

Mr. Blaney: I have tried on several occasions to reserve my questions till the last, but I have been urged to go on, and on three occasions I have opened the examinations, and the other members have followed.

The President: This finishes your examination, Mr. Smith.

Mr. Viegas : I think the object of this Committee is to arrive at a satisfactory conclusion, and everything ought to be done to find out the truth.

The President : Have you any further question to ask ?

Mr. Viegas : Yes, and I would like to examine Dr. Weir also.

Examination of Mr. Smith by Mr. Viegas.

Q.—What was the object of having the new system of house-connections ? *A.*—To get rid of the offensive smells and for the benefit of the health and convenience of the residents of Bombay.

Q.—How are they obtained by the new system ? *A.*—Under the old system there were no traps whatever between the sewers and the house gullies. The sullage flowed on the surface of the house gully and the whole arrangement gave rise to unpleasant smells.

Q.—Do you prevent these smells only by the use of traps ? *A.*—Yes, and vent pipes to carry off sewer air to a height where it is innocuous.

Q.—Are you prepared to say that the siphons are not a source of danger to the public of Bombay ? *A.*—I don't think them a source of danger, but on the contrary a great safeguard.

Q.—How do they act as a safeguard ? *A.*—By preventing the escape of sewer air in or about houses.

Mr. Bhalchandra Bhatawadekar : Are we to go over the whole ground again ?

Mr. Kaikhosro Kabraji : I submit these questions have been asked and replied to before.

Mr. Viegas : Am I to go on or listen to these lectures from Mr. Bhalchandra and Mr. Kabraji ? I am not satisfied.

The President : It is quite true the questions have been asked, and you will find them in the report.

Mr. Viegas : I have a certain object in view, and I like to ask these questions.

Q.—What are the advantages of the house drains ? *A.*—Without them you must have the sullage flowing on the surface of the house gullies.

Q.—Do you think that the gullies receiving sullage water on the open surface a source of danger ? *A.*—Yes.

Q.—And it was on that account that the new system was introduced ? *A.*—That was a great point.

Q.—Would you like to modify anything in the new house-connection system after having examined it ?

The President : Mr. Smith has already put in plans showing modifications.

Mr. Bhalchandra Bhatewadekar : I must object to this examination.

Mr. Smith : I have put in two plans.

Mr. Viegas : In what do the modifications differ from the present house-connections ?

It being five o'clock, the Committee adjourned until Friday, the 19th instant.

BOMBAY, *19th August* 1892.

AT the meeting of the Committee held this day, there were present:—

Javerilal U. Yajnik, Esq., President; Ardasir D. Mody, Esq.; Brigade-Surgeon-Lieut.-Col. S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; Dominick A. D'Monte, Esq., M.D.; Fardunji N. Bisni, Esq.; Framji D. Divecha, Esq.; W. C. Hughes, Esq.; Kaikhosro N. Kabraji, Esq.; Meherjibhai R. Setna, Esq.; Nanabhai N. Katrak, Esq.; Pherozeshah M. Mehta, Esq.; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissioner; the Acting Executive Engineer; the Health Officer; and the Secretary.

The minutes of the meeting held on the 12th instant were signed.

The Secretary read the following letter, dated 17th instant, addressed to himself:—

DEAR SIR,—I wish to add to the evidence I have already given that a drain of the same design as that proposed by me has been for some years in use in the Public Victoria Stand on Esplanade Road in front of the Bombay Club. The only difference is that the Bombay Club drain is of cast-iron, of small size, while my design is of masonry, of larger size. It is made of that shape in the Victoria Stand to prevent the *kachra*, *i.e.*, the horses' grass from falling into the drain and to allow carriages and passengers and horses to pass over it without difficulty.

It fulfils that purpose effectually, and I am of opinion that the drain proposed by me to be fixed in such gully will be equally effectual in improving our health by preventing the evolution of bad smells.

I should mention that the iron drain fixed in the Victoria Stand is of the ordinary pattern used in stables in England.—Yours truly,

D. GOSTLING.

The Secretary: There is a further letter, but it is anonymous.

Mr. Pherozeshah M. Mehta: I think it would be rather a bad precedent to read such a letter.

The Secretary: As a rule, the Corporation decline to deal with anonymous communications.

Mr. Blaney: I have looked through the letter, and I think it a valuable document to which no one need be ashamed to write his name.

Mr. Pherozeshah M. Mehta: Valuable as it may be, if the writer will not give his name we cannot deal with it.

Mr. John Wallace, C.E., examined.

The President: Mr. Wallace, will you kindly inform us of the special points in regard to house-connection, on which you wish to offer your evidence?

Mr. Wallace: I have rather come here for the purpose of answering any questions which may be asked of me.

Examination of Mr. Wallace by Mr. Blaney.

Q.—Are you aware of the object of this Committee? *A.*—I am.

Q.—Are you acquainted with the city of Bombay and with the habits of its people? *A.*—Yes.

Q.—Have you read the evidence already given. *A.*—I have.

Q.—Whence have you obtained your knowledge of Sanitary Engineering? *A.*—In Cairo, Bombay and Cawnpore.

Q.—What work have you done in Cawnpore? *A.*—I prepared the designs for the water works and the drainage of the city.

Q.—What kinds of drains and sewers exist in Cawnpore? *A.*—Open sewers.

Q.—Where do they discharge? *A.*—Into the Ganges.

Q.—What is the greatest length of sewer in Cawnpore? *A.*—About 2¾ miles in length, generally of a circuitous direction, and irregular.

Q.—What is their condition as regards efficiency and the protection from smells? *A.*—For the greater part they are exceedingly bad, with one exception, about as bad as can be. That is speaking of the main drains. With regard to the gutters, their condition varies a good deal.

Q.—What is the state of the street gutters? *A.*—In some cases the street gutters are properly lined and graded, but in many cases they have no lining and no proper grade, and the sullage accumulates and lies there until it overflows and evaporates; so, generally speaking, the condition of the street gutters is exceedingly bad.

Q.—Where do you get your present water-supply from? *A.*—From wells.

Q.—What is the average depth? *A.*—About 50 feet.

Q.—What do you consider the average quantity of water in all that goes into the gutter? *A.*—About seven gallons per head per day.

Q.—Do you know the quantity in Bombay? *A.*—I don't know.

Q.—What finally becomes of this water? *A.*—A great part soaks into the ground and some runs into the river.

Q.—What is the death-rate in Cawnpore? *A.*—For ten years 54 per thousand per annum.

Q.—Do any of the open street gullies work well? *A.*—In some few cases, very well.

Q.—Describe the best of them? *A.*—The best one I know is in Gallis Bazaar Street which is 950 feet long with gutters on each side and lined with brick. Waste water from the houses enters these gutters by passages made by the owners of the houses. These passages are badly built and obstruct the escape of much of the waste material thrown out of the houses; so, generally, it is more or less decomposed before reaching the street. The grade of this street is 1 in 100, and taking 7 gallons per inhabitant for 475 inhabitants *plus* 45 gallons used by the *bheestees*, the street gutters are kept in excellent condition and without more than the ordinary smells which one would expect to find. If the side

drains leading from the houses were properly laid, the system would be as complete as could be desired.

Q.—Is the open system of house drains a suitable system for Bombay? *A.*—I think so.

Q.—Do you wish to say on what you base your opinion? *A.*—Principally on the evidence I have just given concerning Cawnpore, my observations made at various times of the day and in the hot weather when there has been a shade temperature of 105° and night temperature of 90° and humidity about 17 to 23 or 25 per cent. I, therefore, think that, if a street of 950 feet long can be kept in good condition with such a small water-supply, shorter lengths of drains could be safely introduced in Bombay and well worked.

Q.—And with a larger water-supply? *A.*—Yes.

Q.—Are you of opinion that an open channel is a good means of communication between the house and the street? *A.*—I am.

Q.—What are the means used at Cawnpore for carrying sullage water from the upper floors of houses to the street? *A.*—The houses are constructed with a groove down the face of the wall into which the *nahanis* discharge. Water naturally overflows the grooves and renders the wall damp. In some cases it is covered with sheets of tin from old kerosine tins, and during the monsoon season the walls are washed by the rain, but during the dry season a good deal of smell is produced.

Q.—Are wall siphons used? *A.*—Never.

Q.—Do you know why? *A.*—I can only suppose that the wall siphon forms part of a more recent arrangement and would offer very little advantage, considering the existing means of disposing of the water.

Q.—Are any means used to check the entrance of smells into houses through the sewers? *A.*—None I know of. There are no sewers; they are open drains.

Q.—So there is nothing to check? *A.*—Nothing.

Q.—Do any smells get in? *A.*—The smells are those from the gutters down the walls and from the street where the sullage is decomposing.

Q.—It is a minimum of smell? *A.*—On the contrary Cawnpore is remarkable for its number and the strength of its smells.

Q.—If it was well kept? *A.*—If it is well kept like the Gallis Bazaar, the smell is very little.

Q.—What system of conduit would you use in Bombay to convey from the houses the refuse water and other waste materials, such as sand and ashes, that are at present put into the house-connections so as to avoid the choking that frequently takes place? *A.*—I would use pipes of the straightest possible contour without valves or siphons and within the *nahanis*. I would recommend a device common in Turkey and Egypt. It consists of a square block of stone sliding over the opening and closing it against smells. The stone can be easily fixed by the hand or a stick, and in that way the house is perfectly cut off from escapes of gas and from the smells from cesspits.

Mr. Pherozeshah M. Mehta: Will you kindly give a more detailed description of the block of stone?

Mr. Wallace: A piece of marble or other stone like a thin brick is laid on the opening of the *nahani* and slides off and on when pushed. The stone lasts a long time and makes a safe joint. If it is left open, the fact is at once made known to the inhabitants by the smells, and their attention is drawn to it. It is the simplest device I know of, and one that has been in use for many years in Turkey and Egypt. There is another method I tried in Bombay, but not for a sufficient length of time to allow me to recommend it. It consists of a floating ball of copper on the principle of a ball tap. The ball is in a vessel very like a cistern head, and the ball floats in one-third of its own displacement. When a rush of water goes into the head, the ball floats until the water and any solid matter it may carry has passed; then the ball closes the mouth of the vertical pipe on which it rests. This I had in use six or eight weeks and it worked very well indeed, but, in order to recommend it, it would be necessary to make a longer test and with a longer pipe. It also had the remarkable advantage, that it was quite independent of the evaporation which often throws the siphon out of use. If a part of a house is left untenanted and the water in one of the siphons evaporates—whatever precautions the other people in the house may take—they are liable to suffer from the escapes of gases by the dry siphon. The ball precludes smells at all times.

Mr. Blaney: What are your objections to the wall siphons? *A.*—My principal objection to the wall siphon is that it was designed for another purpose to that which it is used for in Bombay. It was designed to form a seal and pass liquids, but it is used in Bombay to pass liquids and solids. In a sewer a velocity of 3 feet per second is required to render it self-cleansing. That cannot be got in a siphon. A velocity of 3 ft. per second on its whole sectional area into the siphon *plus* an additional velocity to lift the solid matter against gravity over the end of the siphon would be needed and cannot under the circumstances be provided.

Q.—Do you believe in the efficiency of the ventilating pipes? *A.*—I do.

Q.—Will you kindly look at this sketch? *A.*—It is the drawing of a ventilating pipe with a return pipe. This model (white) as arranged at present involves an escape or discharge of gas from the line of the pipe whenever water is put in the pipes at any storey in the building. The air in the pipe is displaced and driven before the sewage and may be carried into a window from the different siphon heads. Although the ventilating pipe passes to the top of the roof, there is no guarantee against foul air when water is being thrown into the pipe. It is exactly a *fac-simile* of an arrangement once used in France for the blowing of iron furnaces; water fell in a broken column down a tube into a chamber drawing air with it, which accumulated in the chamber and was led by a pipe to the furnace. If the

velocity of the water gives it force enough to displace the air, the further it falls the greater its force ; and, therefore, there must be a discharge through the siphon heads or the cistern heads, and the discharge will find its way into a house through any open window. It may be that, when the pipes are clean, the nuisance is not sufficient to demand a more perfect arrangement, but if foul air is to escape properly there must be a return branch above the inlet of a *nahani*. The foul gas must not be allowed to escape at any other place than at the top.

Q.—Would the system in the sketch be safe ? *A.*—It is not a new system; it is safe.

Q.—You have now explained the action of the ventilating pipes ? *A.*—I think I may add something to my explanation. There are three causes which account for the escape of foul gas from the pipes as represented in the white model ; there is the variation of atmospheric pressure which in Bombay amounts to $\frac{2}{10}$ths of an inch of mercury equal to $2\frac{3}{4}$ inches of water. This represents the difference of resistance of the atmosphere to the escape of gases of organic matter and represents the difference in the disposition of the gases to escape from any foul surface, such as the foul surface of the inside of a pipe. There is the action of the sun on the pipe, and there is the action of the wind on the pipe. These three things have a varying influence upon the discharge of gases.

The sun warms the pipes and produces an upward current. The influence of barometric falling pressure increases the discharge of gases of decomposition, and increases pressure in places where they are found confined, as for instance, between two siphons. If the down-take pipe from a house enters a drain without any siphon, and that drain were closed above and below the down-pipe, or on each side, the alteration of barometric pressure would probably be sufficient to force the seals and discharge sewer gas into the houses. This is obviated by the use of ventilating pipes, and it points to the necessity of ascertaining exactly what difference of pressure occurs in the drains of Bombay. Siphons, if they are used, must be used with relation to the variation of pressure in sewers and I am not aware that such experiments as I suggest have been made in India. In any case the conditions are different to those existing in Europe.

Q.—Have you examined the currents with them by way of experiment? *A.*—I have. About eighteen months ago I made an experiment in Khetwady in the pipe attached to the outside of a house connected with *nahanis*. The pipe went down the side of a house ; and joined to it was a horizontal pipe running towards a sewer. On the horizontal pipe was a short pipe 18 inches long ; the branch pipe was vertical and was about 12 feet from the nearest vertical pipe taking water from the *nahanis*. The sun was shining on this side of the house, and a very slight current of wind was blowing against the same side. I applied smoking brown paper against the opening, and the smoke was drawn in down the pipe along the horizontal pipe, and went into the house by the *nahani*, showing that under given circumstances

a discharge of foul air may get into the house unless precautions are taken to prevent it. I went into the house and smelt the air from the pipe. The inhabitants of the house had been complaining of increased sickness since the pipes had been put in.

Q.—They were all sick ? *A.*—There was sickness at the time.

Q.—You found that condition in all *nahanis* at that house ? A.—In all.

Q.—What means would you employ to protect the interior of the down-take pipes ? *A.*—The only remedy I would suggest is the process used in water pipes—a coating of tar which is known as Dr. Augus Smith's process. A coating of enamel would be more perfect, but I am afraid the cost would render it prohibitive; and in order to keep the pipes clean, I would have them fixed so that they could be cleaned from above by means of a brush and weight as chimneys are swept.

Q.—But people here don't clean anything at all. Of course, you mean Municipal servants ? *A.*—Yes.

Q.—I want to know whether your observations on the house in Khetwady were on a recently sewered house by the Municipality; and was the house in perfect order ? Was it a good example of a well-sewered house ? *A.*—I don't know how long it had been done, but it did not show any signs of deterioration.

Q.—Is there any time of the day when smells are more noticeable than others? *A.*—Four in the morning and four in the afternoon, the periods of lowest barometric pressure. Four in the afternoon is employed to visit places complained of, but four in the morning is a still better time. The cause is the reduction of barometric pressure which renders the escape of gases of decomposition more easy at these hours. At four in the morning there is an additional circumstance. It is very near the period of lowest temperature, and these gases, being heavier than atmospheric air, lie on the surface of the ground instead of rising as they do in the afternoon when heated by contact with the ground.

Q.—Then, it follows if these gases are formed in the maximum limit at that hour—that is, the hour people sleep—it is the most dangerous? *A*—Certainly, and the windows being closed and the opening of the *nahanis* being at the floor level and the escape of warm air from the bed-room at a higher opening, the bed-room becomes a chimney and a current is drawn to the room, and for a time the bed-room is being ventilated through the down-take pipe.

Q.—Is any precaution necessary in the construction of sanitary works on account of the fluctuations of barometric pressure ? *A.*—I think the one I have mentioned, the ascertaining of the pressure liable to arise in sewers and drains of any length, would be a valuable aid to Sanitary Engineers in determining their works.

Q.—And the Health Officer too ? *A.*—Certainly.

Q.—More especially of the air ? *A.*—Certainly.

Q.—Are there any advantages in catch-pits ? Where would you place them, and what size is to be preferred ? *A.*—The size of

a catch-pit is determined on two things—the quantity of stud and the opportunities of emptying it. That could be determined by those in charge of the work. The best position is at the bottom of a pipe where it would act as a seal for the air driven down by the water. It would overflow into the gully and arrest the discharge of solid matter. There is nothing new in the existence of a catch-pit. The pipe could be made to enter at the side of the catch-pit and not at the middle, thus giving the greatest amount of room for the man who cleans it. The water in it would form a seal.

Q.—What is the use of a seal unless you know the fluctuations of the gas pressure to which it is exposed? *A.*—None; it may be a delusion, insomuch that it gives a sense of security, whilst in reality it gives none at all.

Q.—There is no sanitary engineering work on India yet? *A.*—None that I know of. The only works I know of are the works of doctors, and they stop where the engineers would begin.

Q.—The Government is now taking a great interest in the health of this country and asking the people to spend lakhs and crores of rupees for sanitary works; do you think it is desirable that there should be a standard work for India in connection with the habits of the people? *A.*—I think there is nothing so necessary. Indian sanitation has no basis except water analysis; air analysis has not been made yet.

Q.—This Corporation has refused, I am sorry to say? *A.*—Until we have a series of analyses representing the change of air, there are no data to go on.

Q.—That would be a justifiable data to go on? *A.*—We cannot work without.

Q.—A work such as that would save many thousands of lives? *A.*—Certainly.

Q.—And it would be the means of saving crores of rupees? *A.*—I have said that the doctors leave off where the engineers would commence; doctors not having the practical experience in handling of materials, they give us little information as to how to set about obtaining the conditions necessary for health. Such a work must be the effort of many men.

Q.—Quite so; but you could sell it at Rs. 30 per copy?

Mr. Pherozeshah M. Mehta: It is not a question of cost, but where to get it.

Mr. Blaney: If we start such a question, we will get it.

Mr. Cowasji Pestonji: Appoint a Committee!

Examination of Mr. Wallace by Mr. Ardasir Mody.

Q.—What is your opinion of the gully trap? *A.*—I don't think I have seen the gully trap.

Q.—Do you know the present system in vogue? *A.*—It has been designed in England without the least regard to India. I can only speak of the gully trap as a catch-pit. It must be proportionate to its duties. An ordinary gully trap like this would soon be choked (red model) by what came down the down-pipes. It was designed in England and brought out here. As a catch-pit it is too small; as a gully trap for liquids alone it is well enough.

Q.—There is water in the gully trap ; do you think the water seal acts? *A.*—I have no doubt it does so long as water is there.

Q.—Does it depend on the quality of water? *A.*—On the quantity mostly.

Q.—Supposing it is full, does it depend on the quality? *A.*—You mean, is there a passage of gas through the water?

Q.—Does it act? *A.*—If you had strong ammonia on one side and pure air on the other, there is no doubt the water would absorb it on one side and smell on the other. If there is no current, even if the water is sewage, I should have no apprehension of a passage of gaseous matter through the trap.

Q.—Will it prevent the passage of sewer gas from the sewers? *A.*—I think so.

Q.—No matter what is the condition of the water? *A.*—I don't suppose urine would make any difference, or distilled water to the passage of sewer gas.

Q.—Supposing there is a high pressure of sewer gas, will it pass through the trap? *A.*—If the seal is 3½ inches and the pressure 4 inches, it will go through ; if the pressure is 3¼, it will not.

Q.—What is the pressure generally? *A.*—I cannot tell.

Q.—What would you expect at Khetwady? *A.*—I have no data to go on.

Q.—Have you tested for the passage of sewer gas in Bombay? *A.*—No, I have only observed the escape of it. I have observed the escape in the Sirdar's Mansions. The wall pipes were made without joints and sewer gas escaped at several joints, and as soon as they were closed the nuisance stopped.

Q.—What I want to know is whether gas will escape from the sewers through the gully traps? *A.*—I can only repeat that where the head of water in the gully trap is greater than the pressure in the sewer, there will be no escape. If any gas is absorbed and passes through the seal, it is so small as not to enter into calculation. I don't think it is a matter which need occupy the meeting, particularly when for ⅛th of a square foot of surface in a siphon there may be 6 or 8 square feet of front pipe surface in question.

Q.—Can you form a general opinion about the escape of sewer gas? *A.*—General opinion is based upon no fact whatever.

Q.—You wish to have a catch-pit at the end of the down-take pipe, so that the solid matter may collect at the bottom? *A.*—Yes, and not obstruct the gully.

Q.—There would be some liquid in the pit? *A.*—Yes.

Q.—Then, that would be a source of nuisance? *A.*—If they are cleaned in reasonable time, there is no danger.

Q.—The most they could be cleaned is twice a day? *A.*—They need only be cleaned once a day. There would be much less danger than at present.

Examination of Mr. Wallace by Mr. Cowasji Pestonji.

Q.—You have said down-take pipes get fouled? *A.*—Yes.

Q.—And it is difficult to clean them? *A.*—It is.

Q.—Supposing we provided each down-take pipe with a revolving piece, a shutter, it would then be easy to clean? *A.*—It would, but if the pipe could be brushed from the top, it would obviate the necessity of an opening.

Q.—But people will not clean pipes themselves. You talk of a ball-valve at the cistern head, and water coming from the *nahani* would displace it, would not the ball-valve be displaced by a current of air ? *A.*—The ball-valve is displaced by the water and the water drives the air before it; consequently, if the water were not stronger than the air, it would not go down the pipe. There is no fear of air escaping.

Q.—So you believe that, whilst water is passing through the pipe, the air will not escape into the house. Supposing instead of your ball-valve we were to place a valve near the *nahani* top and put the tube into a slanting position, and supposing we had a flap-valve over it with the pipe below, would it not act efficiently ? *A.*—So long as it acted freely, it would ; it would be similar to the valves on tidal rivers.

Q.—Exactly.

Mr. Blaney : Would it soon get out of order ?

Mr. Wallace : An ordinary hinge would soon get out of order.

Examination of Mr. Wallace by Mr. Meherjibhai Setna.

Q.—With regard to the house in Khetwady, you said there were no siphons ; don't you think the entrance of the gas would have been prevented by a siphon ? *A.*—It would not have escaped into the house to the same extent. But I only advocate siphons for liquids ; the moment you pass sand into them and other matter, which the velocity of the current will not carry, then it becomes a cause of stoppage.

Examination of Mr. Wallace by Mr. Nanabhai Katrak.

Q.—There are some suggestions to prevent the smell of the down-take pipes, and I wish to know your opinion about them. One is to have a double set of pipes like trochar and canula. Is that feasible ? *A.*—No, you could not attach the branch pipes out of sight nor slip one siphon within another.

Q.—Another suggestion is to do away with the down-take pipe. By the Act we are required to have the gully at least 3 feet wide, and supposing we took the pipe from the *moree* clear of the wall and directed the stream of water to fall on to the surface below, would that be feasible ? *A.*—It could be done, but wind might blow the current into a house below, and it would splash and foul the walls.

Q.—There is another suggestion to have a long slit in the pipe as proposed by Mr. Gostling ? *A.*—I have tried to imagine in what way water could descend the pipe without escaping. The water going in a broken column and driving the air before it could not come down without escaping and, instead of ventilating to the top of the house, the air would be driven out of the slit, and consequently into the house. I cannot see what advantages it offers.

Q.—Another suggestion is to have the pipe of larger dimensions so that it could be cleaned with a brush. Do you think a larger pipe would do ? *A.*—I see no advantage from larger pipes.

Q.—A small pipe can be cleaned with brushes ? *A.*—Yes, the same as the tubes in a locomotive boiler. They could be cleaned from above very easily.

Q.—Can it be cleaned from below? *A.*—It might if you don't attempt to clean the whole length. If you join a great number of rattan canes as a brush handle, there is too much flexibility. It would have to be cleaned in sections.

Q.—Supposing we had a slit? *A.*—You could only clean it as chimneys used to be swept. The safest thing would be to take out a length of pipe.

Q.—Can the pipes be made to do this? *A.*—I think so.

Q.—Supposing we had such a system of kutchrah shoots as Mr. Gostling shows, do you think in that case siphons would be of any use except making it complicated? *A.*—Siphons would act perfectly if no sand was put in the pipes.

Q.—Do you think that state of things could be obtained with the two sets of pipes? *A.*—I think not.

Q.—You have mentioned the condition of the grooves in the walls at Cawnpore, and you say that in some houses they are sheeted with tin; what is their condition when sheet tin is applied? *A.*—The water is prevented from splashing into the street.

Q.—So it is an advantage to have it? *A.*—There is less smell when the sun and air can get to the sullage, but more mess.

Q.—How are sewer gases formed? *A.*—By the decomposition of organic matter.

Q.—In the liquid portion of the sewer. It is due to the decomposition of substances in solution, suspended in the liquid portion and the solids? *A.*—Exactly.

Q.—And they escape on a variation of temperature or pressure? A.—Yes.

Q.—They come through the body of the water? *A.*—Yes.

Q.—It is claimed for the siphons that when these gases pass from the water they are rendered innocuous? *A.*—I think not. In the first place, if gases bubble through the water in the siphon, the water is more or less contaminated, or it would not be there; and if the gases bubble through they are not changed, because only the surface of the bubble is brought in contact with the water. They may be changed, but very little. When gases have to be purified a very large surface is exposed to the action of water. The conditions you mention offer no advantages.

Q.—There is nothing in the water to make it innocuous in any way? *A.*—No.

Q.—Supposing the Corporation cannot dispense with the siphon, do you believe that the system of return pipes ventilation will enable the siphon to serve its purpose? *A.*—It will dispose of the gases which are driven out at present at each storey when there is a discharge of water, but the nuisance caused by blockage by solids will remain. If the discharge can be disposed of through pipes without a siphon and foul smells can be disposed of without a siphon, I don't understand anything which would compel the Corporation to keep them.

Q.—What are the real advantages of having open drains broadly speaking? *A.*—I think the first advantage is the distance which

separates the house from the sewer, the distance in air, rendering escapes impossible, the advantage that solid matter which might decompose, is arrested and removed, and thirdly, the advantage of economy.

Q.—Is there not freer ventilation? *A.*—That is included in the first proposition—the separation of the houses from the contamination of the sewers.

Q.—Which would you like to relegate the Drainage Department to; the Engineering or to the Health? *A.*—I don't think either could take charge, they must work in harmony.

Q.—If it is not possible?

Mr. Pherozeshah M. Mehta: Why is it impossible? There must be two departments. We now see Dr. Weir and Mr. Smith sitting very harmoniously side by side at this table, with the Commissioner beaming on them.

Mr. Nanabhai Katrak (to Mr. Wallace): Is it possible to have continuous flushing? *A.*—It is, but I don't see the advantage of it if the solid matter gets sufficient liquid to carry it to the catch-pits. The supply of water in Bombay and the amount of liquid sullage should be sufficient to keep the gullies clean, and if that is the case, it would be a waste to have continuous flushing. That, however, can only be determined when the requirements of the work are more evident. It is not a thing I can advise you on at present.

Q.—With regard to the end siphon in order to do away with any inconvenience which may arise from this end siphon, it is proposed to have it flushed. *A.*—In my reply to Mr. Blaney's questions regarding the Gallis Bazaar, I said that there was a total quantily of 7·6 gallons per person per day, and that was thrown into a gutter 950 feet long, and that kept it clean.

Q.—There was no siphon? *A.*—None. For this road 7·6 was sufficient with the visit of the sweepers to keep the gutters of 950 feet in very good condition.

Examination of Mr. Wallace by Mr. Bhalchandra K. Bhatavadekar.

Q.—Do you think the present house-connection system in Bombay is based on scientific principles? *A.*—Well, that is a vague question.

Q.—Are they scientifically correct? *A.*—I would suggest that you ask, are they suited to the habits of the people?

Q.—Are they scientifically correct, examined independent of the customs of the people,—I mean theoretically? *A.*—I would rather say that, if I were designing the arrangement, I would make them different. Nearly every one has some different opinion in carrying out sewage works.

Q.—Are they adapted to the habits and customs of the people? *A.*—I think the habits of the people must be like those of Cawnpore. I consider I am acquainted with the habits of the people and I don't think this system is suitable. It looks too much like an English model.

Q.—Do the English models work well in European cities? *A.*—Yes, and that is why they work badly here. The conditions vary.

Q.—Do you think the present size of down-take pipe sufficient? *A.*—Quite.

Q.—Even taking into consideration the different substances put in? *A.*—If the siphon is retained, I don't suppose any size will be sufficient, but, if abolished and large solid matter is arrested, the pipes are amply sufficient.

Q.—But if there are no means of arresting solids? *A.*—Then the pipes had better be abolished.

Q.—What is your opinion about the red model? May it be safely introduced into Bombay? *A.*—I have just given my opinion. I have proposed that at the foot of the down-take pipe a catch-pit should be placed to arrest solid matter and not allowed to flow on the gully, and the trap should be larger requiring less frequent cleaning. Every gully trap is a catch-pit more or less and should be proportionate to the solid matter coming down it. The number of times they will be cleaned is an economic question.

Q.—Would you prefer an open gully instead of a pipe? *A.*—I would.

Q.—The impression left on my mind is that the present system as working in Bombay allows the escape of gas into houses, and in the majority of cases there is an escape of sewer gas? *A.*—I would rather say of gases not from the sewers but from the down-take pipes. My experience has been more with regard to the gases from the down-take pipes than the sewers, but the escape of gas depends upon the seal between the sewers and the houses. I think that from which the inhabitants suffer most is from the down-take pipes.

Q.—They are equally dangerous? *A.*—Yes; the same.

Q.—The means you mention for blocking the *nahanis*; will that prevent the smells? *A.*—That is the only means I know, and will work very well, and is so simple that it is incapable of abuse.

Q.—And does not get out of order? *A.*—No.

Examination of Mr. Wallace by Brigade-Surgeon-Lieut.-Col. S. O'B. Banks.

Q.—You see these white and red models; do you think either suitable for the inhabitants of Bombay? *A.*—I don't think they are so good as they might be.

Q.—Which do you prefer? *A.*—The difference between them is that in one the catch-pit is at the end of the pipe and in the other at the end of the gully.

Q.—Do you think the red model the best? *A.*—There are defects in both of them comparatively speaking.

Q.—How would you advocate getting rid of house rubbish from houses independent of sullage water? *A.*—If it were separated, the shoot proposed by Mr. Gostling would be a simple arrangement,

but I am uncertain to what extent it would be open to abuse, even with the precautions of Mr. Gostling; it is a very simple arrangement.

Q.—You were speaking of the Sirdar's Mansions; what is the system in vogue there? *A.*—I was speaking of the pipes.

Q.—What do they open into? *A.*—A cesspool.

Examination of Mr. Wallace by Mr. Accacio G. Viegas.

Q.—How long have you been in Cawnpore? *A.*—Sixteen months.

Q.—Will you tell me what is the mortality of Cawnpore? *A.*—54 per cent. during the last ten years.

Q.—Do you know the mortality of Bombay? *A.*—I believe it is 24.

Q.—What makes the difference between the two places with regard to mortality, so far as you can explain? *A.*—The insanitary condition of Cawnpore.

Q.—Of what does that consist? *A.*—The saturation of the ground principally, imperfect ventilation and over-crowding to a certain extent, the population having increased at a greater rate than the houses.

Q.—Do you think Cawnpore would be much better off if the saturation could be prevented? *A.*—Certainly.

Q.—Do you think the saturation could be prevented by having a pipe drain? *A.*—Not entirely.

Q.—Then, how could it be done? *A.*—By a system something like what we have been discussing. There should be underground sewers terminating in open channels making a passage to the house and that associated with increased water-supply which is necessary for the proper working of sewers.

Q.—Are the objections attaching to open drains applicable to a certain extent to open channels? *A.*—They are the same things. An open drain may be of any extent or length, provided the sewage is diluted to a safe point so that it will not poison the atmosphere. Cawnpore has one of the best sewers in India. It is flushed from the canal and drained into the river. My house was within 40 yards of it and only on one occasion a smell came from it, which was offensive, and that was at the time the canal was dry and the water cut off. Cawnpore has some of the best, along with the worst, examples of open sewers.

Q.—Is the sewer of which you speak as the best, an open sewer? *A.*—Yes.

Q.—You don't think open sewers are a source of danger to the inhabitants of a city? *A.*—I don't; provided there is a proper supply of water to dilute their contents.

Q.—Do you think that dilution of the contents of sewers prevents decomposition? *A.*—It alters the nature of the decomposition. It does not prevent it.

Q.—Have you any facts to submit in advancing this statement? *A.*—No; I think we have come to the point at which the doctors step in. Their evidence would be more valuable on this point than mine. (Hear, hear.)

Q.—Would you be surprised to hear that dilution of sewage will not alter the gases which result from decomposition? *A.*—Not at all.

Q.—So I think you are prepared to admit that even dilution of sewage will not prevent decomposition? *A.*—Water absorbs a great deal of the gas, and the more water you put in the sewage the more gas it will absorb. If it were otherwise, it would be very unwise to turn sewage into the sea for you would be increasing the danger.

Q.—The only way in which dilution will act beneficially is by the gases of decomposition being absorbed in water? *A.*—That is one of the ways.

Q.—Do you know of any other? *A.*—There is the combination of the gases with the oxygen in the water.

Q.—Do you think the sewer gases have the power of obstructing the oxygen? *A.*—They combine. When sewage passes into a river where it is largely diluted, there is a process of oxygenation, and according to experiments it appears that the sewage in the Ganges disappears very rapidly and cannot be recognised five miles below the town.

Q.—Do you think the saturation of the soil at Cawnpore with sullage is due to the system of open drains? *A.*—No; not entirely. In a bad system of open drains when they don't act and the sullage gets into the soil, it poisons it.

Q.—You would advocate a system of open drains in Bombay? *A.*—To a certain extent. An open drain may be innocuous, but it may not be desirable.

Q.—I believe that you admit that decomposition will take place in open channels which you advocate? *A.*—Certainly it takes place; decomposition is not arrested in open channels. Immediately fruit is taken from the tree or an animal killed, decomposition begins; it is slow at first, but it is always going on.

Q.—Why do you object to wall siphons? *A.*—I have answered that question three times.

Q.—I understand you object because they are a source of danger? *A.*—Yes, because they will not allow solid matter to pass.

Mr. Blaney: That is the very same answer to the very same question.

Q.—Do you object to wall siphons because they are a source of smells? *A.*—No.

Q.—You don't think the water in the siphons is of such a dangerous character as to emit gases which are of the same nature as sewer gases? *A.*—No, because you may only have an area of one-sixth of a square foot in the siphon, and you may have 16 feet of pipe surface above it.

Q.—In the white model, is it possible for sewer gases to enter the *nahanis*? *A.*—If the pressure is greater than that in the gully trap. If water is coming from the top storey of a house down a pipe 30 feet long and there is a siphon at the foot of the house 2½ inches deep and there is no free escape for the air, it will blow through the seal and escape into the houses at the ground floor.

Q.—Before sewer gas gets to the wall siphon it has to pass through the siphon of the gully trap. Will not these two water seals prevent sewer gas going into the house? *A.*—I don't think there is any gully trap between the wall siphon and the *nahani*.

Q.—Is there not a water seal in the gully trap? *A.*—Yes.

Q.—Then it has to pass it. Don't you think the presence of these two seals is a sufficient safeguard to prevent the entrance of sewer gas into the houses? *A.*—Not at all. Instead of taking my last instance of 30 feet, take 15. If sullage falls one-third bore of the pipe, it would force the seal of water in the siphon and get into the house; unless there was some side-opening at which the air would be forced out of the pipe, the seal would not represent a sufficient resistance.

Q.—I am speaking of sewer gas? *A.*—I think we are both speaking of sewer gas, because there is no difference between the stink in the down-take pipe and the sewers.

Q.—I am speaking of the gas on the street sewers, and I ask whether the sewer gas in the street sewers will not be prevented getting into houses by the presence of the two seals—one in the gully trap and the other at the wall siphon? *A.*—I think probably it would, but I must qualify it by saying these seals must be equal to any fluctuation of gas pressure in the sewers. If they are equal, then they prevent the escape of gas.

Q.—Does your experience of the Bombay sewers and house-connections entitle you to say that the resistance of the present water seals is insufficient for this purpose? *A.*—No, I cannot say I have seen a sufficient number. My experience at the Sirdar's Mansions was sufficient to satisfy me they were bad, and the experiments of which I have spoken in testing the current through pipes show that it was easy to discharge gases into a house by putting water down a pipe.

Q.—I believe you said that with return pipes the present system may be retained? *A.*—It may, but the siphon is superfluous and the difficulty of cleaning it would remain the same; otherwise it would not be detrimental.

Q.—The grating at the *nahani* would prevent the more solid particles which choke the down-take-pipe? *A.*—The discharge of sand would form an obstacle, particularly with the grease from cooking vessels. If it is possible to obtain security from gases without siphons, there is no use using them.

Q.—Could not the siphon be cleansed by a bolt at the upper surface? *A.*—I think it would be impracticable, and equally so at any opening at the bottom.

Q.—I am not speaking of an opening at the bottom. Supposing we could have a staff sufficient to clean the siphons by means of these bolts, would you have any objection? *A.*—None whatever, except that I should object to pay for it as a citizen.

Q.—You have seen these ventilating shafts? *A.*—Yes.

Q.—Have you any objection to them? *A.*—I think they are excellent things ; only one opening would have done, for which two are employed.

Q.—Is there any danger of sewer gas escaping at the joints? *A.*—If they are properly made, there would be no escape.

Q.—If a strong breeze blows, would it loosen the joints? *A.*—What I suffered from at the Sirdar's Mansions was an absence of joints, and as soon as they were filled with cement the nuisance ceased. I would expect the same nuisance to arise in this case if the pipes were not properly jointed. One tube would have done what the double tube is doing. The real object is not to get out foul air and put in pure, but to equalise the barometrical pressure and prevent the forcing of the seals of houses.

Q.—You speak of the enamelling of down-take pipes? *A.*—The advantage would be that the pipe would be prevented from oxydizing.

Q.—Is the expense justifiable in view of the advantage it would bring? *A.*—I doubt it, but I am not able to quote the cost. I think, however, the Angus Smith process deserves a good trial.

Q.—You would advocate it being tried and would abide by the result? *A.*—There would be no harm in using it, but to show the results it must be taken in comparison with something else.

Q.—Will your catch-pits be on the ground level or underneath? *A.*—They would be more convenient under the level of the ground.

Q.—Will they not be a source of danger by organic matter being received in them? *A.*—Only if neglected.

Q.—They will not be worse than the wall siphons? *A.*—No, they should be easier to manage and easier to clean.

Q.—And your objection to wall siphons is only because they cannot be cleaned easily? *A.*—Yes, and in the second place the object of the siphon can be obtained by a cheaper method.

Q.—Will the contrivance which you speak of as existing at Cairo, consisting of a stone, do away with the danger of any foul air entering the house from the wall siphon? *A.*—I recommend it as a thing I know is used in places where the inhabitants will put solid matter into the siphons. It is the most simple device I know.

Q.—So with that device you would not have any practical objection against wall siphons? *A.*—Except what I have stated.

Q.—Do you know why the present system of house-connections was introduced and the reasons for doing so? *A.*—I do not know.

Q.—I beg to tell you, Mr. Wallace, that the chief object of the system was to do away with the constant danger of having decomposition in open channels between houses.

Mr. Blaney : Where did you find that?

Mr. Viegas : I have got it in the course of this examination.

Mr. Blaney : That is all right ; I thought it was some authoritative statement.

Mr. Viegas : I think it will be found in the report.

Q.—Do you think the present house-connection system does away with the source of danger from decomposition in gullies? *A.*—I don't quite understand.

Mr. Blancy: I should think not.

Mr. Viegas: The refuse from vegetables decompose in the gullies, and to prevent this the pipe sewers were introduced? *A.*—That is important. The vegetables were left there and pipes were constructed to carry them away.

Q.—The pipes are carrying them away? *A.*—Then I am a good deal surprised to hear it.

Examination of Mr. Wallace by the Commissioner.

Q.—I don't think I completely understand the system you advocate—if you advocate any special system—with reference to the details of the way in which solid and liquid matters are to be conveyed from the *nahanis* to the channels and from that point to the sewers. I assume that both solid and liquid matters will flow from the *nahanis*, and you will have a down-take pipe in a groove in the wall, and at the foot of the down-take pipe a small catch-pit? *A.*—Yes.

Q.—The catch-pit would lead to an open channel? *A.*—It would discharge into an open channel.

Q.—There would be no question of siphons? *A.*—The down-take pipe in the catch-pit becomes a siphon.

Q.—Is it not on the principle of the old D trap at home? *A.*—The down-take pipe enters the trap at the corner and goes to a certain depth and forms a seal and forces the air to escape by another orifice.

Q.—The difficulty you mention with regard to a rush of air through a down-take pipe and unsealing siphons is felt in England? *A.*—Yes.

Q.—How do they get over it? *A.*—They use the return pipe I have described.

Q.—Can you point me out any text book in which a pipe is shown such as you describe? *A.*—It is a familiar arrangement to me.

Q.—Is it in any work on plumbing? *A.*—It is. I am not sure whether you will not find it at Victoria Terminus.

Q.—I said in England? *A.*—It was brought from England.

Q.—My object is to find out how English Sanitary Engineers get over the difficulty which is common to all countries in the world. What would be about the size of the catch-pit you recommend? *A.*—That would be determined by the amount of stuff going into it and the periods of emptying.

Q.—I don't suppose we could guarantee to empty them more than once in 24 hours and the amount of stuff would be a varying quantity. Assuming that the red model provides for a catch-pit between the gully and the pipe sewer, you prefer one at the foot of each down-take pipe? *A.*—Yes, for the reason that it becomes a seal. I also prefer it because it will obviate the nuisance of solid matter being carried down the channel and festering there.

Q.—Theoretically it is preferable, but you know the gullies of Bombay and the condition of the Native Town and the number of down-take pipes; the number of catch-pits would be enormous. Don't you think the practical difficulty of emptying would be very great?

A.—I cannot estimate exactly the practical difficulties, but if all gully-traps requiring emptying——

Q.—They don't require attending to more than once in a month, but the catch-pits would require cleaning every day, and you contemplate they should be cleaned by manual agency. What I wish to arrive at is whether in your opinion the greater labour and cost of emptying the great number of catch-pits are not sufficient to counteract the advantages they have over the single catch-pit at the end of the gully? *A.*—I don't contemplate any great addition of labour, because the men have already to enter the gullies and it is not a long process cleaning the catch-pit with a scoop, and I think it will be found in working that it is not a serious objection.

Q.—You have your catch-pit at the bottom of each down-take pipe and from it flows the liquid into the open channel to the pipe sewer in the street; would you place a water seal between the house gully and the pipe sewer? *A.*—Certainly, and in many cases where you have storm-water entering the gullies it would serve a double purpose.

Q.—That is a question for careful consideration? *A.*—There must be no open direct communication between the sewers and the air.

Q.—We have it by means of ventilating shafts? *A.*—But not near the surface.

Q.—You insist upon the running siphon as an indispensable condition? *A.*—Yes.

Examination of Mr. Wallace by Mr. Pherozeshah M. Mehta.

Q.—How long have you been in India? *A.*—Six years.

Q.—And before that? *A.*—Nearly ten years in Egypt, where the mortality occasionally rose to nearly 60 per thousand.

Mr. Blaney: I have to propose, on behalf of the Committee, our heartiest thanks to you, Mr. Wallace, for the evidence which you have given before us and the great amount of light which I consider you have thrown on this matter.

Mr. Pherozeshah M. Mehta: There is no doubt we are very grateful to Mr. Wallace.

The Commissioner: I most entirely and cordially endorse those remarks.

The President: We are very much obliged to you, Mr. Wallace, for your evidence.

Mr. Wallace: I am happy to have been of any service to the Corporation of Bombay.

The Committee then adjourned until Tuesday, the 23rd August.

Bombay, 23rd August 1892.

At the meeting of the Committee held this day, there were present :—

Javerilal U. Yajnik, Esq., *President*; Ardasir D. Mody, Esq.; Brigade-Surgeon-Lieut.-Col. S. O'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; Dominick A. D'Monte, Esq., M.D.; Fardunji N. Bisni, Esq.; Kaikhosro N. Kabraji, Esq.; Nanabhai N. Katrak, Esq.; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissioner; the Acting Executive Engineer; Mr. Fern, Inspector; the Secretary; John Hewson, Esq., A.M.I.C.E., M.S.A., of the firm of Campbell & Hewson, Architects, Civil Engineers and Surveyors.

The minutes of the meeting held on the 16th instant, were signed.

Mr. Hewson read the following letter, dated 22nd instant :—

To THE PRESIDENT AND MEMBERS OF THE COMMITTEE OF THE CORPORATION considering the system of House-connection Drainage.

GENTLEMEN,—In reply to my letter of the 16th instant to your address, the Municipal Secretary favoured me with the printed proceedings before you, from which I find your inquiry has reference to house-connections only. I will therefore confine myself as far as possible to this question.

In my experience the present system of house-connection has failed in every detail in draining house sullage containing sand and ash.

I will deal with each part of the present system from the *nahani* to the sewer.

Discharge Pipes from Nahanis.

It is usual to find the *nahanis* of two rooms divided one from the other by a 6" brick cross wall so as to admit of the drainage of both *nahanis* discharging into one cistern head and down one pipe.

The discharge pipe fails in the following particulars :—

(*a*) It is too small to discharge what by the habits of the people are thrown into the *nahani*, such as sand, ash, night-soil, grass and leaves.

(*b*) In some cases the pipe is too short and does not go through the wall to the *nahani* which admits of the sullage flowing into the wall and into the lower rooms.

(*c*) The **T** piece at the end of the pipe obstructs the flow of sullage.

Regarding (*b*), on the 10th of August 1892, my firm addressed the following letter to the Municipal Commissioner :—

"SIR—With reference to your letter No. 9936 of the 3rd of August "1892, we have the honor, on behalf of Mr. Govindjee Hunsraj, to lay his "complaint of the 3rd of August 1892 more fully before you after an "inspection of his building No. 124, Kalbadevi Road, consisting of a "ground floor and 5 upper floors.

"(*a*) That 28 copper drainage connections have been cut out of his "south wall and taken away by the Municipal workpeople, 1 on the

"ground floor, 7 on the first storey, 7 on the second storey, 7 on the third "storey, 3 on the fourth storey, and 3 on the fifth storey ; they cost Rs. 5 "each : for the 28, Rs. 140.

"(*b*) That the cast-iron connection pipes substituted by the Muni- "cipal workpeople (in place of the copper connections removed) are not "long enough to go through the wall, and the length has been made up in "each connection by a piece of thin sheet iron bent round and having no "connection whatever with the cast-iron pipe (*see* exhibit marked A, sent "with this letter) ; the effect is that the drainage soaks into the body of the "wall and percolates into the dwelling-rooms, impairing the soundness of "the wall and the timber framing.

"(*c*) That you will cause the 28 connections of two pieces of pipe each "to be removed and connections of one piece of pipe inserted, so as to "prevent any leakage of drainage into the walls.

"(*d*) That the pipe connections should be of copper, as cast-iron will "decay and allow the drainage to soak into the walls and thereby materially "damage the building.—We have, &c.,

"CAMPBELL & HEWSON."

No reply to this letter has been received up to date, the copper drainage connections, I am informed by the owner, were 4" in diameter, fitted with gratings at the junction with the *nahanis* in thorough good order, and needed no repair from the time of design by Mr. Kahandas Muncharam, late Executive Engineer, Presidency.

In my opinion these pipes should not have been removed, but simply the return ends cut off and cistern heads prepared to suit the pipes.

Cistern Heads.

(*a*) The cistern head is an ordinary rain-water pipe head and was never designed for sullage (*see* Mr. Baldwin Latham's design, page 59, Sanitation of Bombay).

(*b*) The head is not wide enough to receive the two *nahani* discharge pipes and the pipe from the upper floors.

(*c*) The angles in the heads are places of deposit for heavy sullage and grass dropped by birds in buildings, which result in a complete blocking up.

(*d*) The outlet of the head is too small for sullage from native houses.

Regarding (*b*) and (*c*) I would point out that these defects are in some cases well known. Mr. Keshowjee Damodar, the owner of house No. 301-303, Bazaar Gate Street, found his rain-water pipe heads constantly blocked up with sullage and fixed up copper heads about 1'-0" × 0'-7" × 0'-9" with a cover at the top ; these never foul, and worked well for many years.

Mr. Benson, Acting Deputy Executive Engineer, Drainage, called upon the owner to remove these copper heads as they were unsuited to the present system of drainage. I, on the owner's behalf, strongly remonstrated. The heads still exist, but the owner has been in fear of a summons to the Police Court for not removing them.

Cast-iron Down-take Pipes.

(*a*) The pipes are too small for the peculiar character of sullage from native houses.

(*b*) They readily oxydise and attract the heavy deposit of sullage on the inside.

(*c*) The pipes in lengths from floor to floor, one over the other, prevents obstructions being cleared or the pipes cleaned.

(*d*) The pipe being over the gully trap conducts the sewer gas into the house.

Regarding (*d*), here again must sanitary science learn something from native construction. The old masonry down-take pipes (lined with a circular tapering burnt clay piping) in length from floor to floor, never continue in one straight line, but are set off to the side to a distance equal to the thickness of the pipe. This arrangement you will see has a two-fold benefit :—(1) The pipes can be easily cleaned ; (2) there is no continuous flow of gas ; it becomes dissipated at the out-let at each floor.

The Siphon Gully Trap.

(*a*) The peculiar character of the sullage from native houses containing sand and ash and sludge unseals the trap after slight evaporation and allows the flow of sewer gas to escape.

Regarding (*a*)—In 1890 I leased a large house in Albany Street, Bedford, one of the Midland Counties of England. The house was drained somewhat similar to the system now in force in Bombay. In the passage leading to the garden were two siphon gully traps which I will designate as A and B. A received the drainage from the bath and overflow from the supply tanks ; B received the sullage from the scullery. The sullage passing to trap A was simply bath-water. The sullage to B was food refuse and the scourings of cooking utensils with sand, so that the character of the sullage passing to B was very similar to that passing from a *nahani*. September was a beautiful dry month with a steady temperature of 65°. I found a strong flow of sewer gas from trap B, commencing about 5 p. m. and continuing. By inquiry I found the scullery sink was never used after 2 p. m. ; so nothing passed from that hour into trap B. The conclusion I came to was that the top part of the sand and sludge in trap B evaporated its moisture and the sewer gas passed through it, not conducted, into the house, for the drain pipes enter the gully traps from the side, never from the top. Trap B never blocked. I never found any sewer gas passing from trap A. The siphon traps of the present system of drainage in Bombay are unsealed by the same cause. In most native houses the *nahanis* would be disused say from 8 to 8-30 p. m ; say by midnight the upper moisture in the portion of the sludge in the trap evaporates and the sewer gas escapes and flows up the pipe immediately above it into the rooms.

The Siphon Trap at the end of Gullies.

(*a*) This trap becomes unsealed in precisely the same way as the gully trap, but in a more concentrated form, being the first outlet from the sewer.

I would now lay before you my scheme for house-connection drainage.

I will start at the same point and follow the same order adopted by me in my objections to the present system.

Discharge Pipes from Nahanis.

(*a*) The pipes should be made of copper, 3″ in diameter.

(*b*) The pipe should be in one length, perfectly straight from the *nahani* through the wall and 1½″ outside, and enter a copper or iron sullage head specially designed to take the sullage of two *nahanis*.

In support of (*a*) I would point out that a cast-iron pipe from the flow of sullage decays and would admit of leakage into the wall. There may be no means of knowing when the leakage is taking place, especially as absorption is so great in this country during the dry months. Copper does not

readily oxydise by sullage or take up any deposit. The discharge pipe if inserted at the most important part of a frame building, *viz.*, the junction or the main, cross beams and posts, should not be unnecessarily disturbed.

Cistern Heads.

(*a*) Should be specially designed for sullage from two *ndhanis* to be made of copper or cast-iron 1′-3″ × 0′-7″ × 1′-0″ (*see* design by Mr. Baldwin Latham, page 59, Sanitation of Bombay).

(*b*) The cistern head should be covered in at the top by a grating containing two circular inlets—one for the drainage pipe of the upper floors, and one immediately above the pipe beneath it, for the purpose of removing any obstruction, cleaning or applying any composition to prevent decay and adhesion of sullage.

Down-take Pipes.

(*a*) The pipes should be of cast-iron 3″ diameter in one straight length to each floor.

(*b*) The first storey pipe should not be over the pipe to ground floor, but removed to the side for a distance equal to the thickness of the pipe at least.

(*c*) I am strongly in favour of Dr. Weir's suggestion of having one pipe inside the other—the inner pipe of copper—but not for the purpose of removing the same to clean but to prevent the adhesion of the sullage and decay of the iron, but I fear the expense may be against the universal adoption of this plan.

(*d*) The pipe should terminate one foot from the level of the gully.

Siphon Gully Traps.

There should be no siphon gully traps ; the sullage from the down-take pipes should flow into a paved gully sloping from the sides to the centre and having a gradient of 1 in 80 from the street to the back of the house ; the sullage should flow down the surface of this gully into a masonry settling tank A (see plan of house drainage), 3-0 × 1-3 × 2-0 at the bottom of a ventilating shaft 3-0 × 3-0 ; the overflow of tank A should be run into a similar tank B, from which it would flow into a 6″ stoneware pipe direct to the sewer.

The sullage from the back of the house flowing into the sweeper's passage would pass by C into the settling tank A and overflow in B, and pass to the sewer with the other sullage from the house-gully. The ventilating shaft should be about 5 ft. higher than the house or adjoining buildings, and any gas generating in the settling tank A will flow up it and will soon be diffused.

The 6″ stoneware pipe in carrying the sewerage in one straight line to the sewer would not run full bore, and therefore admit of the uppermost semicircle of the pipe acting as a ventilator to the sewer.

By this plan sewer gas is effectually prevented from flowing into the houses or passing from the junction of the gully to the sewer at the road end. The complaints of sewer gas escaping at this point are universal in the City. The ventilating shaft can be built at the end of a gully without any interference with private property.

The sullage pipe passing out of the ventilating shaft direct to the sewer could be flushed by a constant water supply of pipe connection and would not be disturbed by house-owners, being under the sole control of the Municipality.

I claim that this system of house-connection drainage is also suitable to buildings having no house gully similar to properties to be found in

Bazaar Gate Street; in such a case the sullage from the back of the building would pass into a ventilating shaft built next to the privies, and all sewer gas would flow above the houses.

Hitherto I have confined my remarks to house-connections only, and I would ask you to consider if it would not be advisable on your part to adopt any alteration or improvement to the present system without considering if such alterations would be in unison with other improvements.

I have therefore prepared a plan and section shewing that the proposed ventilating shaft 3-0 × 3-0 could receive the soil from the privies of two distinct houses by the trapless closet proposed by Mr. Baldwin Latham (page 59, Sanitation of Bombay) and removed by hand. It could also pass off by a pipe direct to the sewer.—I have, &c.,

JOHN HEWSON.

During the course of the reading of the statement the following discussion took place :—

Mr. Blaney: Will your ventilating shaft act as an up-take during the day and night? During the day when the sun is shining, it may, but at night when the house is the hottest, there will be a flow of the gases towards the house?

Mr. Hewson: There is no communication with the house. The only inlet is a door at the bottom of the shaft.

Mr. Hewson: I beg to put in the report.

Mr. Viegas: Will it not be better that these plans should be fully explained to the Committee? I don't think we have fully understood them.

Mr. Nanabhai Katrak: They have been fully explained. Mr. Viegas may ask any question.

Examination of Mr. Hewson by Mr. Bhalchandra K. Bhatawadekar.

Q.—I understand you to say that a copper pipe would be better than an iron pipe? *A.*—I have stated so.

Q.—Because they don't oxydize the same as iron? *A.*—I have given my reasons. The sullage will not adhere to it the same as cast-iron.

Q.—With regard to the settling tank, how would you arrange for its cleaning? *A.*—It would be cleaned by the sweeper. I provide a door through which he gets in and out.

Q.—There would be no difficulty about it? *A.*—No.

Examination of Mr. Hewson by Mr. Ardasir D. Mody.

Q.—I think you said there were complaints of sewer-gas in the City? *A.*—Throughout the City there are complaints of the escape of gases which come from the junction of the gully with the road.

Q.—Have you personally examined the sewers for the sewer-gas? *A.*—I have personally smelt it. (Laughters.)

Q.—What is the cause of the complaint? *A.*—The cause of it is primarily of the passing of night-soil into the sewers.

Q.—You know night-soil is passed into the sewers; there is a gully trap which is intended to prevent the sewer gas entering the

houses? *A.*—It becomes unsealed by the sand and ash and sludge passing into it. The solids pass from the *nahanis* and destroy the effect of the trap.

Q.—The trap does not act? *A.*—I have explained the effect of the trap fouling from my experience at Bedford, and I said what would be the effect in Bombay.

Q.—You have seen this red model and know what it is intended for? *A.*—Yes; there is the paved gully, the down-take pipes and the rain-water head, which I say has not been designed for sullage; there are all the angles which would obstruct sullage particles.

Q.—Do you think it is of advantage for chawls in Bombay? *A.*—I think myself there would be great obstruction by the siphon at the end of the gully; the sand and ash passing into the trap would unseal it.

Q.—It is intended to have a catch-pit at the end of the gully? *A.*—Then you will have a deposit of solids in the catch-pit.

Q.—They would not flow into the trap? *A.*—The stench would flow into the street. By my system I take the sullage to the back of the building and the stench flows up a shaft.

Q.—What is the difference between your system and this? *A.*—The diffierence is this, I understand a running siphon is used and the whole of the sullage flows to the street. In my system I take it the reverse way and have no trap whatever.

Q.—If a catch-pit is cleaned once or twice a day, will it be a nuisance? *A.*—Yes, whilst cleaning and whilst the deposit remains there, it will be a nuisance. There is also the objection that it may become so full as to flow over into the siphon, and again in the sullage itself there are always an amount of suspended particles which will flow with the sullage. After a time the moisture would evaporate, and most probably at night, the siphon would become unsealed and sewer gas would flow.

Q.—I cannot understand why there would be no water? *A.*—Because the sand and ash and sludge would displace it.

Q.—But that is prevented by the catch-pit? *A.*—No; a certain amount must flow with the sullage. It will collect the heavy particles, but some will escape.

Q.—Do you recommend any trap with the down-take pipe? *A.*—No, I say it has failed for the reasons I have explained.

Examination of Mr. Hewson by Brigade-Surgeon-Lieut.-Col. S. O'B. Banks.

Q.—You are an Engineer? *A.*—Yes.

Q.—You are connected with architecture? *A.*—Yes, for the last 18 years I have been in private practice.

Q.—You do not think the present system of house-connections a desirable one for Bombay? *A.*—I do not.

Q.—You spoke of smells at the end of house gullies near the sewer? *A.*—Yes.

Q.—Are such complaints confined to any district in particular? *A.*—The last complaint made was at Bhuleshwar. A man sitting at his shop complained most bitterly of the stench from the end of a gully. Another case was at Kalbadevi Road. There is no complaint during the day, but it is after dinner that the stench arises in a fearful manner.

Q.—You don't approve of the traps? *A.*—I do not. I would if you could secure the sealing of them with pure water, but traps mostly fill with sullage heavily charged with solid matter.

Q.—What is the use of a trap? *A.*—To prevent sewer gas escaping.

Q.—Are you aware of the number of gases found in a sewer? *A.*—No.

Q.—Nor under what conditions they are formed? *A.*—I have read Dr. Weir's evidence, but it is a point on which I cannot give an answer.

Q.—In your system, which you propose, all solids and fluids will go by the same route? *A.*—Yes, but heavier solids will of the course settle down in the tank at the end of the house gully and the lighter sullage will flow over it at about 1'-6" from the bottom into another tank before it passes into the sewer. All the heavier deposits would be removed by the sweepers from the sweeper's passage.

Q.—One of the advantages is that you take the sullage to the rear of the house? *A.*—Yes, it goes to the rear and there are no traps.

Q.—Mr. Gostling was examined some time ago and he spoke of a shoot for getting rid of solid matters. It is a custom they have in France. Do you think it would be desirable to use it here? *A.*—No; I think it would become a nuisance. The ghee on the leaves and the refuse will naturally adhere to the sides and become a nuisance.

Examination of Mr. Hewson by Mr. Kaikhosro N. Kabraji.

Q.—Do you know that night-soil is passed through the sewers in Bombay? *A.*—Yes, I know it is passed in many cases. There are privy connections direct with the sewers.

Q.—Are these complaints you speak of from parts of the City where night-soil is made to pass through the sewers? *A.*—I don't know whether it passes through the Kalbadevi sewer.

Q.—The primary cause of the complaint was that night-soil was made to pass through the sewers? *A.*—That is the primary cause of the complaint.

Q.—It was in those parts of the City only where night-soil passes into the sewers? *A.*—I cannot say that. I don't know whether it passes in at Kalbadevi road sewer.

Q.—Is there my other cause according to your experience? *A.*—My experience is this: the drains never smelt so bad before night-soil was passed into them. Years ago there was no night-soil. Since Carnac Bunder has been disconnected, I believe that was the first time it passed in, and the second was when the

privy of Messrs. Craigie, Lynch & Owen was allowed to have direct connection. Permission is now given for connections, and I have permission for a house in Bazaar Gate Street to make a direct connection.

Q.—Would you take exception to night-soil being passed into sewers? *A.*—I would, because your own records show that no explosions took place before night-soil was admitted.

Examination of Mr. Hewson by Mr. Accacio G. Viegas.

Mr. Viegas: Mr. Chairman, I would like the plans to be explained, so that I may know in what this proposed system differs from the present?

[Mr. Hewson then proceeded to explain the plans.]

Mr. Viegas: Do you propose under your system to have open paved gullies between the houses receiving the sullage from the *nahanis*? *A.*—Yes, I propose to have them open.

Q.—What are your objections to having the sullage received into stoneware pipes as at present? *A.*—I have explained that in my report that the trap will not work.

Q.—Supposing there was no trap? *A.*—I think it is better open so that the heavy particles of sullage may settle in its flow to the settling tank.

Q.—Then your object is that the heavy particles should settle into the paved gully? *A.*—Yes, as much as possible.

Q.—Don't you think it is highly objectionable to have solid particles settling in the open paved gully? *A.*—I don't think so; they would be cleaned away every morning and the gullies always kept clean.

Q.—You have no fear of decomposition taking place? *A.*—Yes, slight decomposition would take place, but it would be open and not confined.

Q.—Would not there be a tendency for the gases of decomposition to go upwards and enter the windows of the houses? *A.*—Yes, I suppose it would, but the amount of gas would be so slight that it would be perfectly immaterial.

Q.—Don't you think that the walls of two houses close together form, as it were, a ventilating shaft giving vent to the gases upwards? *A.*—That is the case with every house gully with walls within eight feet of each other.

Q.—Would not this danger be done away with if you had a stoneware pipe underneath the ground in the house gully? *A.*—Of course, there would be a stoneware pipe under the house gully passing from the settling tank to the sewer.

Q.—The pipe will take away the sullage which has already gone the whole length of the gully? *A.*—Yes.

Q.—What would your ventilating shaft be composed of? *A.*—9" brickwork, plastered.

Q.—You would not have ventilating iron pipes or any other kind of ventilating shaft? *A.*—No.

Q.—Do you think the siphons we have at present are a source of danger to the public? *A.*—I am sure of it; they cannot work with sullage heavily charged with matter in the shape of sand and ash.

Q.—Supposing we took the precaution to prevent the entrance of this suspended matter, would your objection disappear? *A.*—Yes, it would.

Q.—Could you not see your way to have a stoneware pipe instead of an open paved gully? *A.*—I don't think you should confine anything which can be left open.

Examination of Mr. Hewson by Dr. Blaney.

Q.—I have only one question. You have spoken about your knowledge of privy connections in various parts of the city, and you have a considerable experience about the existence of these connections; can you give some rough estimate of the number of privy connections which exist in houses in Bombay? *A.*—I could not. I know personally of several, but I cannot tell you the number.

Examination of Mr. Hewson by Mr. Nanabhai N. Katrak.

Q.—Supposing we had a glass pipe of certain length, what would be the cost compared with the cost of a cast-iron pipe of the same size? *A.*—I could not say.

Q.—Is it possible? *A.*—Yes.

Q.—Is it durable? *A.*—I do not know about that.

Q.—If possible, it would be the best? *A.*—I do not know about that. I have a filter with a glass tube which has to be cleaned every week and each time there is a thick green sediment on the side of the tube. It would be the same with a glass pipe.

Q.—But much less than a metal pipe? *A.*—Yes.

Examination of Mr. Hewson by Mr. Kaikhosro N. Kabraji.

Q.—Have you observed the old gully system? *A.*—Yes.

Q.—Don't you think the present system is better than that? *A.*—I think it is better during the day, but the danger takes place at night.

Q.—Did the same danger exist in the former system? *A.*—No, because there there was only sullage in the drain, now you have night-soil, and consequently more deadly gases than formerly.

Examination of Mr. Hewson by Mr. Cowasji Pestonji.

Q.—You prefer the open gullies to the stoneware drains now laid down? *A.*—I prefer the open gully.

Q.—Why? *A.*—Because I think everything round a building should be as plain and simple as possible, and open to inspection.

Q.—You mean to say closed drains are more easily choked? *A.*—Yes.

Q.—And difficult to clean? *A.*—The sullage is more liable to generate gases. With an open drain a certain amount of the sullage is oxydised and deodorized.

Q.—Do you know the Jonning pipe? *A.*—Yes.

Q.—If you were to employ them for the house connection drains, would not they be easily cleaned? *A.*—More easily cleaned than the others, but I don't see any advantage in closing the pipe.

Q.—They can be easily cleaned by taking off lids? *A.*—I don't anticipate that there will be anything so objectionable thrown into a gully that it cannot remain there for a few hours. It is so easily cleaned away.

The President: That finishes your examination, Mr. Hewson, and the Committee is very thankful to you for the evidence you have given and the light you have thrown on this matter.

Mr. Viegas: I beg to endorse the remarks that have fallen from the President.

Mr. Hewson: I am very much obliged, gentlemen, for your thanks.

Mr. E. W. Fern, Inspector, House-connections, was then called.

Mr. Nanabhai Katrak: May I ask who this gentleman is?

The President: He is of the Drainage Department.

Mr. Nanabhai Katrak: But Mr. James is at the head of that department?

The President: This gentleman is chief inspector.

The Commissioner: He was called at Dr. Bhalchandra's request.

Mr. Blaney: It was not put before the Committee.

Mr. Nanabhai Katrak: We have examined the heads of departments and I don't think we can get any further information from the subordinates.

Mr. Bhalchandra Bhatawadekar: If the Committee has no objection, I will see what he has to say.

Mr. Nanabhai Katrak: I don't think anything will be gained.

Mr. Blaney: This matter ought to have been put before us as the others were.

Mr. Bhalchandra Bhatawadekar: I do not wish to examine Mr. Fern for my personal benefit. If the Committee do not wish to examine Mr. Fern, I will not insist upon an examination.

The President: Mr. Fern has now been called. Does any gentleman wish to examine him?

Mr. Bhalchandra Bhatawadekar: I will, if the Committee is willing.

Mr. Blaney: Put it to the vote. For my part I agree with Dr. Katrak that having examined the heads of the departments, it is no use going to the tails.

Mr. Ardasir Mody: Will Mr. Fern be able to throw any additional light on the question?

Mr. Bhalchandra Bhatawadekar: I am told he has been in charge of the House-connections Department for six or seven years, whilst Mr. James has only been in it for six months. If Mr. James could be examined, I don't see why a man with great experience cannot.

Mr. Nanabhai Katrak: We examined Mr. James because we wanted his evidence with regard to the red model. If Dr. Bhal-

chandra thinks anything good will come out of this, I am willing to listen to it.

The President: Is it your pleasure, gentlemen, that Mr. Fern should be examined.

Mr. Viegas: Our votes will be influenced by what Mr. Fern has to say.

The President: Is it your wish, gentlemen?

Seven votes were recorded in favour of the examination of Mr. Fern and none against it.

Mr. Nanabhai Katrak: This is a surprise.

The President: The Committee have resolved to examine Mr. Fern.

Mr. Cowasji Pestonji: I think it would be better if Mr. Fern expressed his views.

The Commissioner: He has nothing to state; he is here in compliance with my order.

The President: He is prepared to answer any question you may ask.

Mr. Kaikhosro Kabraji: I would suggest that some new questions be asked and that we avoid going over the old ground again.

Mr. Blaney: Dr. Bhalchandra can ask any question he likes.

Examination of Mr. Fern by Mr. Bhalchandra K. Bhatawadekar.

Q.—How long have you been in Bombay? *A.*—About 10 years.

Q.—In what position? *A.*—As Chief Inspector of Drainage Works.

Q.—How long have you been connected with the Drainage Department? *A.*—Seven and a half years.

Q.—And house-connections? *A.*—About the same time.

Q.—You are thoroughly acquainted with the habits and customs of the people in Bombay? *A.*—Yes.

Q.—And you are acquainted with the working of house-connections? *A.*—Yes.

Q.—What is your opinion about them as a scientific and sanitary measure? *A.*—If carried out in their completeness and used properly, nothing could be better.

Q.—What do you mean by completeness? *A.*—Three water seals in each connection. If they were put up and properly used, there would be no possibility of an escape of sewer-gas.

Q.—Have they been carried out with completeness? *A.*—In some cases they have and in others they have not. In the Fort district they have not been carried out. In many cases in the Queen's Road and Girgam District they have not been carried out with the completeness.

Q.—Are they suited to the habits of the people? *A.*—Not to the lower classes of the natives.

Q.—Why not? *A.*—Because they throw all kinds of solids into the drains.

Q.—Only the lower classes? *A.*—Chiefly. Generally speaking, all Hindoos throw solids into drains.

Q.—Are they suited to the habits of the Hindus? *A.*—These traps are not.

Q.—Do you think that the down-take pipes are sufficiently large for carrying sullage and sewage? *A.*—Not for sullage and sewage. They are large enough for sullage. For sullage and sewage they should be 4".

Q.—Would that be suitable for night-soil? *A.*—Yes.

Q.—Can you give the approximate percentage of the choking of pipes with sullage and foreign substances and night-soil? *A.*—It would be a difficult matter for me to give a correct idea of that. If you don't mind a guess, I would say about 15 or 20 per cent.

Q.—With foreign matter and night-soil? *A.*—They are never choked with night-soil. It could not choke a trap.

Q.—Have you noticed a smell from the down-take pipes, and what is it due to? *A.*—To the accumulation of filthy matter in a pipe and in the siphon at the head disconnecting it from the *moree.*

Q.—Have you seen a pipe through which night-soil has passed, choked up with other substances? *A.*—Yes.

Q.—What is the smell like? *A.*—Something fearful.

Q.—Is it dangerous to life? *A.*—I should say it was.

Q.—Do you think the ventilating pipes attached to the houses are a nuisance to neighbouring houses? *A.*—Not, if put up properly.

Q.—What do you mean by properly? *A.*—If they are far enough from neighbouring windows. The gas coming out of vent pipe would be dissipated before it could enter a window.

Q.—Do you think the present system of house-connections is suited to big chawls? *A.*—No; I don't.

Q.—Why not? *A.*—Because they get choked frequently.

Q.—What would you suggest in such cases from your practical experience? *A.*—I would suggest a large trap at the end of the house gully with a catch-pit before it and do away with a pipe in the house gully altogether.

Q.—And for middle class houses? *A.*—What do you mean by middle class houses?

Q.—Houses occupied by one or more families. *A.*—If they are of the educated classes, the present system would be applicable.

Q.—You think the educated classes are capable of cleaning them themselves? *A.*—They understand that if they keep on choking their traps, they will have smells and they will take care that the servants keep them clean.

Q.—What is the average life of a cast-iron pipe? *A.*—If it were not tampered with, it would last about twenty years, but they are liable to accidents, and more especially from persons intentionally breaking them by trying to clean them.

Q.—During the last seven years you have been in charge of the section. How many have you seen corroded and treated in the way you describe? *A.*—I have seen many broken, not corroded, by occupiers of the houses.

Q.—Not corroded? *A.*—There is a slight corrosion, but not sufficient to affect the utility of the pipe.

Q.—What is the cause of the overflowing of sullage over the walls of the houses? *A.*—Occupiers taking out the grating of their *nahanis* and passing down solid matter, and persons throwing out rubbish from the windows which get caught on the cistern head and chokes it.

Q.—What would you suggest as a remedy? *A.*—In every house where the intelligent classes live, I think the removal of the cistern head would be an advantage, just as you see in the white model. A straight pipe carried over the roof and wall siphons put in without cistern heads.

Q.—Would there be any overflowing? *A.*—There would be a smaller possibility.

Q.—Any escape of gas into the houses? *A.*—Certainly not, because each connection is ventilated over the roof. If there was any back flow, it would be over the houses.

Examination of Mr. Fern by Mr. Kaikhosro N. Kabraji.

Q.—You said that house-connections are likely to be used properly by the educated classes. Do you know the percentage of the educated classes and the uneducated masses? *A.*—Roughly I should say about 25 per cent. of the people of Bombay are educated.

Mr. Blaney: 25 per cent? I am interested in education very much. You say 25 per cent.? *A.*—Yes.

Q.—You mean men, women and children? *A.*—Yes.

Mr. Blaney: As a member of the Joint Schools Committee, you will be interested to hear this, Mr. Kabraji. I think you are taking him a little out of his depths. It is hardly a fair question.

The Commissioner: What is the use of asking this question.

Mr. Blaney: I think that question ought to be omitted.

Mr. Ardasir Mody: He considers 25 per cent. are educated enough to use house-connections.

Mr. Kaikhosro Kabraji: I don't think Mr. Blaney has understood my question.

Mr. Blaney: Yes, yes.

Mr. Kaikhosro Kabraji (to Mr. Fern): To Hindus generally the system is not suited? *A.*—Yes, to Hindus of the lower class.

Mr. Blaney: I will ask Mr. Fern a couple of questions arising out of his own matter.

Q.—Do you know what the pipe attached to the house is for? *A.*—Yes.

Q.—What do they ventilate? The main sewer? *A.*—Always.

Q.—Then the pipe sewers are main sewers? *A.*—The branches are 6″ pipes.

Q.—Will you tell the Committee how the ventilating pipe acts? *A.*—The longer arm has a shorter end in the manhole and the shorter arm also has an end in the manhole from the longer arm.

Sewer gas comes from the shorter arm and fresh air enters the sewer.

Q.—At all times and seasons? *A.*—I cannot answer that.

Q.—Have you made experiments? *A.*—I have tested with a smoke test.

Q.—Have you any notes? They would be very valuable? *A.*—I have no notes.

Q.—Have you ever used the anemometer above them? *A.*—No.

Q.—There is room still for experiment; they look very nice. Do you think we know all about them because I asked whether they act at all times and seasons? *A.*—I am not able to answer that. Whenever I have tested them, they acted fairly well and smoke issued out of the longer arm.

Q.—At a downstairs house? *A.*—I have put the fire and smoke into the manhole, and in a short time I have noticed it issue from the longer arm and not the shorter.

Q.—Dense volumes are enough to swear by? *A.*—You could see it plainly.

Q.—You have seen the T head at the top of the house ventilating pipe. Is it correct or incorrect? *A.*—Yes.

Q.—No improvement could be made? *A.*—It might be improved.

Q.—Would you be astonished to hear it is all wrong? *A.*—No, I would not under certain exceptional conditions.

Examination of Mr. Fern by Mr. Nanabhai N. Katrak.

Q.—You say pipes don't get corroded? *A.*—No, they do.

Q.—To what extent? *A.*—An 8" pipe would get corroded in twenty or twenty-five years. It would be rendered useless in that time. That is the rate of corrosion.

Q.—And these pipes placed under the gullies? *A.*—They are earthenware pipes and don't corrode.

Q.—Do you know in Dhobitalao pipes were rendered useless in ten years? *A.*—I don't know.

Q.—And mostly all down-take pipes corroded? *A.*—In such cases persons must use chemicals or things of that kind.

Mr. Blancy: All sewage matter contains chemicals.

Mr. Fern: I don't mean chemicals of that kind.

Mr. Nanabhai Katrak: Have you reason to believe people use anything else but sullage water? *A.*—There are some persons who go in for photography. If they wash their plates in the *nahanis*, it would corrode the pipes. That is what I mean.

The Commissioner: Mr. Fern means specially corrosive drugs.

Mr. Nanabhai Katrak: You said if siphons are put up in their completeness, they are a good thing? *A.*—Yes, if used properly.

Q.—Taking the things as they exist and the way in which they have been used for the last five or ten years, do you think there is any chance of their being used in a proper way in the future? *A.*—With the lower classes of natives I don't think there is any imme-

diate prospect of their being used properly, but with the educated classes there is a chance.

Examination of Mr. Fern by Mr. Ardasir D. Mody.

Q.—With regard to Mr. Kabraji's question, it is not quite clear what was intended. You mean to say that the educated classes might use the connections well? *A.*—The educated classes are willing to use them properly.

Q.—What percentage of the population is this class? *A.*—I made a guess before, which appears to be entirely out of it, and I shall not make another guess.

The President: It is quite evident he cannot answer that question.

Mr. Ardasir Mody (to Mr. Fern): In what percentage would you recommend the present system to be continued?

The Commissioner: It is impossible to get at figures.

Mr. Nanabhai Katrak: It is not a practical question.

Mr. Bhalchandra Bhatawadekar: During your experience of seven years, do you think you have been able to educate these people with regard to using house-connections? *A.*—I have been able to induce certain of the better classes to use them correctly, but have made no effect upon the lower classes.

The President: This concludes your examination, Mr. Fern, and the Committee is thankful to you for your information.

Mr. Blaney: I beg to propose that as we have no more witnesses to come before us, we should adjourn until Thursday next, Friday being a Hindu holiday, and that Mr. Smith and Dr. Weir be asked to show us the system as it works. They should take us to such places as will show what defects there are in the system.

The Commissioner: Certainly that can be done.

Mr. Blaney: We ought to meet at the Money School, and Mr. Smith and Mr. Weir will be our guides.

Mr. Kaikhosro Kabraji: I hope we shall get a sight of the large chawls at Dukarwady.

Mr. Blaney: All right, and I will bring down the ladies and they will talk to you.

The Secretary: I suppose you meet wet or fine.

Mr. Blaney: Of course. Mr. Gostling, Mr. Wallace and Mr. Hewson might be communicated with and told we are going, and leave them the option of coming with us.

The Commissioner: There is one point that this Committee might now consider. We might occupy our time by putting into practical shape some of the suggestions made by some of the witnesses. I should like to try Mr. Gostling's system and Mr. Wallace's, and also put in operation something from the style of the model suggested by the Municipal Engineers. At present the resolution of the Corporation prohibits the carrying out of any further connections, but I think some of the grant might be usefully expended in making these experiments with the consent of owners of houses. In two months we could get some idea of their working.

Mr. Blaney: The proper time is after the report is prepared. It is a reasonable proposition and quite in consonance with the object of this Committee.

Mr. Nanabhai Katrak: Before we take any steps, would it not be advisable to request the Commissioner to inform the Committee whether these schemes are practical or not.

The Commissioner: From what I have seen of Mr. Hewson's scheme, I don't think it is practical. We would have all the expense of laying the gully and the pipe drain. I don't see the fun of that.

Mr. Blaney: This will all be considered, and we will have to fight the battle upon each scheme.

Mr. Kaikhosro Kabraji: What Mr. Acworth suggests is, that the whole of the schemes before us should be put to a practical test before a report is drawn up.

Mr. Nanabhai Katrak: I don't think a month or so would give us an idea.

The Commissioner: I think it would.

Mr. Ardasir Mody: Something has been said in favour of the red model. I think it might be tried.

Mr. Blaney: You will find for the past twenty years I have been a great advocate for making experiments.

The Commissioner: Then, why not advocate it now? Will you defer everything until the final resolution of the Corporation?

Mr. Blaney: I think the Commissioner wants to bolt across the race-course.

The Commissioner: The report will not be made for two months and if a dozen of connections on these models are laid down, you would obtain some valuable evidence. I don't think any harm would be done, and it might do good.

Mr. Blaney: But what financial power have we?

The Commissioner: I suggest that the Committee apply to the Corporation.

Mr. Blaney: Before the report?

The Commissioner: Certainly.

Mr. Blaney: I think it is a matter which might be deferred until next Thursday.

The Commissioner: If the Committee will come to some practical conclusion, I shall bring the matter before the Corporation and have it put into operation.

Mr. Bhalchandra Bhatawadekar: If the Committee have to submit a useful report, I think this should be done.

Mr. Blaney: You could not tell how a common water filter could work in that time.

The Commissioner: I think seven weeks would be sufficient to make the test.

Mr. Blaney: I think we had better make a note that this matter will be discussed next Thursday.

Mr. Viegas: This question cannot be discussed in the open air. I think we had better settle it now.

Mr. Blaney: Let the other members have an opportunity of speaking.

Mr. Viegas: I think the suggestion is a reasonable one and will enable us to come to some sort of a conclusion on the merits of the different suggestions. The Committee ought to come to a practical, and not a theoretical, conclusion.

Mr. Blaney: I am glad Mr. Viegas used the words "practical," because I am going to ask a practical question. How many thousand rupees are you going to ask for these experiments?

Mr. Viegas: I should leave that in the hands of the Commissioner.

Mr. Blaney: But you must give him two, three or four of these systems first.

Mr. Viegas: I should say Mr. Gostling's, Mr. Wallace's, and Mr. Hewson's.

The Commissioner: I am not prepared to carry out Mr. Hewson's scheme. I would substitute the red model.

Mr. Blaney: Now, you come to a debateable point.

Mr. Nanabhai Katrak: Let us meet here on Thursday at 3 o'clock and settle the matter.

Brigade-Surgeon-Lieut.-Col. Banks: Why not settle it now?

Mr. Nanabhai Katrak: But we did not put it on the agenda paper.

After some further discussion, it was decided to postpone the matter until the meeting on Thursday next.

BOMBAY, *25th August* 1892.

At the meeting of the Committee, who assembled outside the Money School to-day, there were present:—

Javerilal U. Yajnik, Esq., *President*; Ardasir D. Mody, Esq.; Brigade-Surgeon-Lieut.-Col. S. O.'B. Banks; Bhalchandra K. Bhatawadekar, Esq.; Thomas Blaney, Esq.; Cowasji Pestonji, Esq.; D. A. D'Monte, Esq., M.D.; Fardunji N. Bisni, Esq.; Framji D. Divecha, Esq.; W. C. Hughes, Esq.; Kaikhosro N. Kabraji, Esq.; Meherjibhai R. Setna, Esq.; Muncherji C. Murzban, Esq., C.I.E.; Nanabhai N. Katrak, Esq.; Accacio G. Viegas, Esq.

The Acting Executive Engineer; the Health Officer; and the Secretary.

D. Gostling, Esq.; and John Wallace, Esq.

The Committee proceeded under the direction of Mr. J. W. Smith and Mr. Weir to examine the condition of the house-connections in Dhobitalao. 1st Marine Street was visited, and on entering it attention was drawn by Mr. Smith to a calf tethered to a down-take pipe. That practice, he said, was a constant cause of damage to down-take pipes. The Committee, headed by Mr. Blaney and Mr. Gostling, then entered a gully. The pipes and traps were examined and found to be blocked with *cutchra*. Mr. Blaney removed some of the *cutchra* in the cistern head and found it full of maggots.

Mr. Blaney: Let us stir a few more up. It means cholera, dysentery, and such like diseases.

Mr. Gostling : These traps must have been choked for a fortnight.

Mr. Blaney : This is one of the houses just finished on the new system under the Bulkley contract.

Mr. Bhalchandra K. Bhatawadekar went up to the first floor of the house and announced that the siphons above were all choked.

Mr. Blaney : Oh, that is nothing ; we have choked siphons down here.

A second gully in the same street was visited, when Mr. Blaney took occasion to point out that some of the down-take pipes in the gully were as much as four or five inches in bore.

The Committee proceeded to 2nd Dhobitalao Lane, and three gullies, which appeared to be in a clean condition, were looked at.

Mr. Blaney : We are wasting our time in looking at these ; they have been cleaned to-day.

Mr. Gostling : If they were all like these, there would not be the least objection to the system.

Mr. Blaney : Dr. Weir, this is a waste of time. Let us see the swamps. All these gullies are off the public thoroughfare where intelligent people live. More attention is paid to gullies near large roads.

The Committee then proceeded to the lane to the east of the Adamji Peerbhoy Market where Mr. Blaney drew attention to a gully.

Mr. Blaney : Here is an example, gentlemen, where the whole of the sullage is on top of the gully and nothing in the drain underneath. Here they throw out the *cutchra*, and defecate in the gully, and if the people don't die, it is only because the matter is outside.

A woman appeared at a window looking into the gully. Mr. Blaney spoke to her and asked her how she liked her gully. She answered, "*kharab keeya*" (it has been made bad).

Another gully was entered, where impressive evidence was given of the manner in which house-connections are damaged. A large mass of filthy matter, partly solid and partly liquid, was hurled out of a window into the gully, and Mr. Weir and several members of the Committee, who were in the gully at the time, took away samples of the matter on their clothes. The smell in the gully was described by Mr. Gostling as "abominable" and mosquitoes were plentiful.

Mr. Weir pointed out that, although the people were throwing out heaps of *cutchra*, the gully traps were all working.

Passing through the same district, an example of the large pipe above and a 2½ inch pipe below was pointed out. At the same place Mr. Smith explained a feature of the house-connection. It was a narrow road, and in consequence it had been found impossible to put in gully traps as they would have been destroyed by carts and wall siphons had to be used.

Mr. Blaney invited the attention of the Committee to what he described as a "delectable" gully. The pipes were all blocked and sullage running over the walls in such quantities as was considered sufficient to damage the foundations.

The Committee then proceeded to Cavel. Here two cases of the overflow of sullage and saturated walls were pointed out.

The President pointed out a house which he thought had special interest for them, as it was there the Commissioner was on one occasion nearly deluged with sullage.

Mr. Ardasir Mody : A memorable gully.

Mr. Blaney: There ought to be a memorial tablet.

From Cavel the Committee visited Vithulwaddy, proceeding by way of Cross Lane, which was inspected, and where the blue stone pavement was much broken up.

Mr. Blaney : Anything more calculated to destroy people's health than this could not be imagined. Here you have millions of bandicoots. Beautiful.

Mr. Gostling pointed to a gully where the side walls were shored up. "Here," he said, "is an example of a house which has been damaged by laying the pipes. The whole of the house is cracked from top to bottom, and if stays had not been put in, the building would have fallen."

Mr. Fern, an Inspector, explained that that was a house in which the work had not been completed. It was a rule to put in the timber when the drain was being laid, and in that case it had not yet been removed.

Mr. Blaney held a conversation with a native lady, who complained that, although they flushed their gullies, the "stink" would not go. "Then we get fever," she continued, "and have to send for you doctors."

Mr. Blaney : The lady recognises us.

Vithulwaddy was reached and a number of gullies penetrated.

One gully in this locality was visited, where the pipe drain was choked and the whole place flooded with sullage, in which was large quantities of night-soil.

Mr. Blaney remarked that the sullage and night-soil were rising from the traps like a fountain.

The stench at this place was almost unbearable.

The Committee proceeded to Khetwaddy, where Mr. Blaney pointed out that the old storm-water drains were then receiving most of the sewage. Mr. Blaney penetrated a gully and said that all the privies were blocked and there was a large mass of night-soil on the pavement. There were mosquitoes in tens of thousands in the sullage, and a pretty strong dilution of night-soil was flowing into the storm-water drains.

Mr. Smith pointed out that no house drain had been laid in this case.

Mr. Blaney : I never said there was. Why, are there no house drains ? The work is finished by the Municipality.

Mr. Smith : There is no pipe drain because the gully is inside a house. I have always objected to put a drain inside a house.

Mr. Viegas : I think there ought to be a pipe drain.

Mr. Smith : It is forbidden by the Act.

The Committee then proceeded through Falkland Road Cross Lane into Falkland Road, and on the way Mr. Blaney drew attention to the fact that the gullies were not all of one level.

Arriving at Kamathipura, Mr. Blaney said that the district was the cleanest looking in Bombay, and that death came from within, not from without.

The district was viewed generally, but there was nothing of a particular character to arrest the attention of the Committee.

Mr. Ardasir Mody proposed that the discussion on the advisability of undertaking experiments with new systems of house-connections be adjourned until a future meeting. The Committee, however, proceeded to the discussion.

In reply to a question Mr. Smith said : I think a grant of from three to four thousand rupees will be necessary.

Mr. Blaney : Why not take ten thousand. Don't come afterwards and say the experiments have only been half carried out.

Mr. Viegas : Mr. Smith says three or four thousand is sufficient.

Mr. Blaney : It is not a grant out of cash balances.

Mr. Smith : With four thousand I can lay down Mr. Gostling's plan, Mr. Wallace's plan, and the three plans I put in.

Mr. Blaney proposed " that this meeting advises the Corporation to allow Mr. Acworth to expend to the extent of Rs. 10,000 out of the grant for house-connections for the first section of the drainage, for conducting such experiments as are recommended by the experts."

Mr. Nanabhai Katrak seconded.

Mr. Viegas : Would not seven thousand be enough.

Mr. Smith : I will not expend more than is necessary.

Mr. Bhalchandra K. Bhatawadekar : I would suggest that a preliminary report be submitted first of what is to be tried and then we can go to the Corporation.

Mr. Nanabhai Katrak : We have already the reports of the experts.

Mr. Blaney : Do you think the Rs. 10,000 is enough, Mr. Smith ? there must be water flushing.

Mr. Smith : I think Rs. 10,000 will be ample.

The President : Will you limit the time in which the experiments are to be made ?

Mr. Smith : I think about two months will be sufficient.

Mr. Muncherjee Murzban : That will be ample.

Mr. Nanabhai Katrak : It will not be ample but will give an idea. We will not be bound by these experiments.

The resolution was then unanimously adopted.

Mr. Kaikhosro Kabrajee : Will it not be better for us to meet a week hence in order to go through the evidence before discussing the points ?

Mr. Blaney : We ought to discuss a skeleton report at the next meeting.

The President : I suggest that Dr. Blaney draw it up.

Mr. Blaney : If you adjourn for a week, I will try and do so.

Brigade-Surgeon-Lieut.-Col. Banks : Take a fortnight.

It was then decided to meet on Friday, September the 2nd, and that the services of the reporter be engaged for that occasion.

BOMBAY, 2*nd September* 1892.

At the meeting of the Committee held this day, there were present :—

Javerilal U. Yajnik, Esq., *President ;* Ardasir D. Mody, Esq. ; Brigade-Surgeon-Lieut.-Col. S. O'B. Banks ; Bhalchandra K. Bhatawadekar, Esq. ; Thomas Blaney, Esq. ; Cowasji Pestonji, Esq. ; Fardunji N. Bisni, Esq. ; Nanabhai N. Katrak, Esq. ; Pherozeshah M. Mehta, Esq. ; Accacio G. Viegas, Esq.

H. A. Acworth, Esq., C.S., Commissioner ; the Acting Executive Engineer ; the Health Officer ; and the Secretary.

Mr. F. F. Gorden, Reporter, was also present.

The minutes of the meetings held on the 19th and the 23rd ultimo, were signed.

Mr. Viegas : Before we proceed with the business of the meeting, I would point out the desirability of putting an advertisement in the newspapers asking native mistries if they will come forward and give their evidence.

The President : I think there is plenty of time for that.

The Secretary : There is a letter from Mr. Aderjee.

The Commissioner : Is he the gentleman with his own system ?

The Secretary : Yes.

Read the following :—

BOMBAY, 29*th August* 1892.

TO THE PRESIDENT AND MEMBERS,

Bombay Municipal Corporation.

GENTLEMEN,—I have the honour to submit for your consideration the accompanying correspondence which has passed between me and the Municipal Commissioner and the Standing Committee on the subject of a scheme of my own for the better cleansing of sewers in the city.

2. A careful perusal of the correspondence will, it is to be hoped, fully impress you with the importance of the subject, especially at this juncture when a Committee of your body is occupied in taking evidence on the suitability, or otherwise, of the house-connections which have been introduced for a few years past into certain districts of the city.

3. The correspondence, it will be seen, has gone on for the last ten months. But to me it is a matter of the deepest disappointment that it should not have been attended with that practical result which, as a native of this city, I had hopefully looked forward to, having regard to the public spirit, with which its representatives discharge their onerous and responsible functions of local self-government. The barrenness of my efforts, I am sorry to say, is mainly owing to the prejudice with which the Municipal Drainage Engineer, under instructions from the Standing Committee and the Municipal Commissioner, scanned my project. Though he granted me an interview on 1st October last, in obedience to those instructions, I am constrained to state that he investigated the merits of my project in such a way as to lead me to believe that he did not approach it with an open mind. In his report to the Municipal Com-

missioner, dated 25th November last, he observed that he could see nothing special in my scheme to recommend it to him. This was simply a foregone conclusion which I had fully anticipated after the interview he had had with me. In my reply thereto to the Standing Committee, dated 12th February last, I was obliged to differ from his conclusion. I observed that the scheme was not so devoid of merit as was reported. The Engineer was unable to recommend it, simply because he failed to give it the fair and patient consideration it demanded. It would have deserved a better fate at the hands of an impartial expert. Some controversial side issues were also raised in that report which it became necessary for me, in self justification, to dispute.

4. Reluctant as I am to intrude upon your public time, I refrain from entering again into the particulars of my project which have been described at sufficient length in the appendix which accompanies my letter of 12th February 1892 above referred to. Suffice to say, that is neither complicated nor costly. It is, I believe, free from those defects which the Health Officer has pointed out in his recent quarterly report with regard to the system of house-connections. In short, the system is simplicity itself, and will, in my humble opinion, prove of the utmost efficacy without in the least endangering the lives of the people of this great city as the house-connections seriously threaten to do. But whether my system answers all I urge in its favour or not, my earnest request is that you will be so good as to give it that fair and impartial consideration which, I am sorry to repeat, I failed to meet at the hands of the Municipal Engineer. I appeal to your sense of fair play and to your public spirit to grant me that consideration. Let it be approached without any foregone conclusion whatever. Let it be submitted to the judgment of experts whom you may possibly select for the purpose. My sole desire is that it should be subjected to the ordeal of careful examination but with an open mind. This is all I ask for and this much I fain hope you would be so good as to grant me. I leave it to fall or stand on its own merits.

5. No authority is better aware than yourself that a critical stage has been reached in the matter of the practical sewerage of the city. According to the facts presently brought to light, it seems that it is fraught with no little peril. Such is the gravity of that peril that you have, in the best interests of the city, undertaken on yourselves the most arduous and responsible task of probing to the bottom the state of matters with regard to the house-connections as brought to your notice by the Health Officer. It may be that the evidence now being taken may nullify or corroborate his statements. The subject cannot be prejudged. But at any rate no harm could come if meanwhile the scheme I have ventured to submit for your consideration is subjected to expert criticism. Should it unfortunately be found by your Committee that the present system of house-connections would certainly prove dangerous to the health of the city, it is evident that some other good scheme, which might be free from all sanitary defects, would have to be considered. What could be more useful than an examination of and, if need be, a trial, for which I am prepared with my project?

6. I respectfully submit that it is only by a careful consideration of all possible schemes that the Corporation can ever hope to obtain for the city a system which will at once be found to be suitable for the

masses and at the same time free from all insanitary conditions which are now the subject of alarm among our citizens. Under the circumstances I earnestly hope that, actuated by the same laudable public spirit which has hitherto characterized all your deliberations in the management of local affairs, you will be pleased to accord my scheme the favour of that full and fair examination which it deserves, in such a manner and form as may appear most proper to your corporate wisdom.—I have, &c.,

FRAMJEE ADERJEE EYABARA.

Mr. Nanabhai Katrak: Is Mr. Aderjee an Engineer?

The Commissioner: No.

Mr. Smith: I have never seen him; so he does not refer to me.

Mr. Blaney: Has he any scheme?

Mr. Nanabhai Katrak: Is there one attached?

The Secretary: Not that I am aware of.

Mr. Ardasir Mody: A member of the Committee may be requested to look into the matter.

The Commissioner: This gentleman appeared before Mr. Walton and myself, and he seemed to be labouring under a grievance. He was asked to lay his scheme before the Corporation, but afterwards he said he did not want to.

Mr. Blaney: If he has not given us a scheme and does not want to appear before us, what can we do? We don't know anything about it.

Mr. Pherozeshah M. Mehta: He has no special qualification?

The Commissioner: None. He has a kind of doll's house model which he will explain. Mr. Walton has made a report on it. He had also a system of sewer cleansing which he declined to explain, but asked that the Corporation should first adopt it and hand over to him whatever saving there was in cleaning sewers for a certain period. Of course we could not accept such an offer.

Mr. Blaney: He might be asked to appear before us.

Mr. Nanabhai Katrak: That would occupy too much time. Let us ask him to send in a scheme, and if we find anything in it we can call for him.

Brigade-Surgeon-Lieut.-Col. Banks: But he wants pay first.

The letter was then recorded.

The following was also read:—

No. 221.

BOMBAY, *25th August* 1892.

To THE MUNICIPAL SECRETARY,

Bombay.

SIR,—With reference to your No. 5388 of 1892-93 of August 1892, I have the honour to enclose a statement of my views on the subject of house-connections now under the consideration of the Committee, and beg you will be good enough to submit the same to the Committee at their next sitting.—I have, &c.,

VINAYAK M. NAVALKAR.

The present System of House-connections.

From my 12 years' experience as plumber in this City, and from what I gathered during my recent tour in Europe, I am of opinion that the system now being introduced into Bombay is quite sufficient, if well carried out, to meet local circumstances and native habits, with, however, certain modifications to which I shall now proceed to allude.

I consider that all down-take pipes should be fixed in a vertical position, and that no horizontal pipe be allowed as far as practicable.

The tee discharges should always be in one piece, and should penetrate the entire thickness of the wall, and not require any jointing. The grating should be cast with the branch, so that the occupants of the dwelling cannot remove the grating whenever there is the slightest obstruction in the *mori*.

Any solid matter which obstructs the flow should be removed by hand.

If possible a small curved masonry basin, say of 3″ depth and 6″ breadth, should be constructed within the *mori*, at the point of outlet ; in this receptacle the solid matter could rest until cleared.

I consider the present 2½″ down-take pipe quite sufficient for ordinary dwelling houses, as the volume of water obtainable under ordinary circumstances is just sufficient to thoroughly cleanse such pipe.

But I think that the ordinary 4″ rain water pipe should be substituted wherever there is a cook-room, and also to all the *mories* of chawls where one *mori* has to serve all purposes.

I further consider that, wherever it happens that there is more than one outlet, the cistern head should be of a broader size than at present, but, as far as practicable, several discharges into one cistern head should be avoided. The cistern head should further be covered with a fine grating. The present system of placing the gully trap just below the down-take pipe I consider objectionable, as it renders the cleaning of the gully trap a difficult matter.

When a scavenger cleans the gully trap and with his plunger forces the water into the drain pipe, then there is a chance of the foul gas also being forced back into the down-take pipe.

I think it would be advisable to allow the sullage to flow, not directly into the gully trap but on to a masonry basement sloping into the gully trap.

Of course this basement would have a small parapet on two sides, so that any solid matter could lodge on this basement and be easily removed.

A large staff of scavengers should be employed and worked twice a day, until the people get used to the system, as they will very soon, considering the great advances they have made in understanding, appreciating and carrying out for themselves any sanitary benefit which has been explained and made clear to them.

It is not many years since all night-soil and rubbish was thrown on to the public road, but as they begin to appreciate the efforts of the Municipality to promote the public-health and welfare, they willingly abide by the bye-laws framed for their benefit.

I would beg further to suggest that an inspecting chamber be constructed with a moveable lid at the end of each private gully. The dimensions to be not less than 2 feet by 2 feet and the siphon be

immediately connected with it—so that a man could enter the chamber and remove the solid matter lying at the bottom of the siphon.

The 2½" head ventilator at the end of the gully under the present system seems to answer well, but I would suggest that the size of the other ventilator between the siphon and the Municipal drain be increased, say to either 4" or 6" and the tee heads on all ventilators be dispensed with, a cone-shaped ventilating cowl being substituted. This will prevent birds building their nests in the tee heads.

A practice now obtains of keeping a bend at the head of the 6" drain pipe of a gully for flushing purposes; in addition to this I would suggest that inspecting tees be inserted at regular intervals of at least 50 feet, if not closer, and the Municipality should cause these tee inspection pipes to be opened and examined, and the drain pipe to be thoroughly washed out at stated intervals.

There are many drain apparatus which I could suggest, both of the kinds which I have seen utilized in Europe and of kinds I myself have imported and am fixing to several public and private buildings, whose owners can afford the cost, but what I have suggested is most reasonable in point, both of efficiency and economy.

It is with great surprise and regret that I find that it has been suggested that the obsolete system of open drains be reverted to. The objections to open surface drains were so apparent, that I considered the matter would not be re-opened. The sight of the exposed refuse and night-soil, the overflow of the filth mingled with the flushing water on to the road, the dividing of the bottom slope, and consequent percolation of the foul matter into the sub-soil are all subjects which have been so fully discussed years ago ; that the mere suggestion of open drains in a City like Bombay seems to be a retrograde movement which should be entirely ignored in this advanced age.

In conclusion I beg to suggest that, if the Committee be pleased to visit the Secretariat, the High Court, the Port Trust administrative offices and any other buildings I have fitted up with sanitary appliances, I shall be glad to wait on them and accompany them with a view to afford them any information they may desire.

VINAYAK M. NAVALKAR.

Mr. Viegas : Is this man willing to come and give evidence ?

Mr. Pherozeshah M. Mehta : He does not say so.

Mr. Nanabhai Katrak : He wanted to come before us, but we told him to send in a written statement.

The letter was then recorded.

Mr. Smith : I put in a statement of complaints made by house-owners.

The Secretary : Has it to be printed.

Mr. Pherozeshah M. Mehta : I think it need not.

Mr. Viegas : I think it would be advisable to have some native mistries examined, as it would show us what they think of the house-connections. I myself have had a talk with several, and it seems that it would be very desirable to have their evidence before us. I think the object of this Committee is to hear everything that can be said on the house-connection question, and the greater the variety of evidence the better.

Mr. Pherozeshah M. Mehta: The resolution which the Committee have come to is that there is sufficient material before us to make a preliminary report recommending the Corporation to enter on certain experiments; if it is necessary to take further evidence, we can do so later. We can now proceed to discuss the report.

Mr. Viegas: I do not think we are going to send in a report.

The President: That is a matter for our consideration. You will remember that at the last meeting we decided that Dr. Blaney be requested to prepare the heads for a report.

Mr. Viegas: Is that preliminary report to be presented to the Corporation for the purpose of obtaining sanction for experiments? I don't think the Corporation will require a report.

The President: Upon what is the Corporation to decide?

Mr. Viegas: I think a requisition from this Committee is all that is necessary.

Mr Pherozeshah M. Mehta: The only way of doing it is by a preliminary report recommending certain action to be undertaken. That is the regular course.

Mr. Nanabhai Katrak: I may mention that the printed report of the proceedings of this Committee are circulated amongst the members, and our opinions are based on them. I don't think it is necessary to send in a report.

Mr. Viegas: Before Dr. Blaney proceeds to read his draft-report, I beg to submit that we were ready to ask the Corporation at the last meeting to sanction this grant, and I don't think Dr. Blaney's report is necessary to obtain the sanction of the Corporation.

Mr. Pherozeshah M. Mehta: What is the use of playing upon words? We know that, when a Committee approaches the Corporation, it has something on paper which it calls a report.

The President: Will you go on Dr. Blaney?

Mr. Blaney: I don't know whether Mr. Viegas is done. I understood at the last meeting that we should draw up a preliminary report to lay before the Corporation when asking for this grant for experiments. Therefore, I drew up a skeleton report which contains all the main points with reference to the whole of the house-connections. I wish that the members themselves should vote upon a few of the major points which are to form the report, and if they agree it will be a complete report to present to the Corporation.

Mr. Pherozeshah M. Mehta: We need not commit ourselves to any opinion, but simply say that the Committee, having heard the evidence of certain people, is of opinion that it is desirable, before making final conclusions on the matter, that certain schemes should be experimentally tried in certain parts of the city and, therefore, recommend that they should be carried out.

Mr. Blaney: I have divided this skeleton report into eleven heads, but most of them refer to the final report. I have put them here because they are in order. I will, with the permission of the Committee, place them before you in the order in which I have got them, and you will see which of the points which I bring before

you refer to asking the Corporation's sanction for these experiments, and those which concern the final report.

Mr. Pherozeshah M. Mehta : Cannot we settle a report now ?

The following preliminary report was then agreed to :—

PRELIMINARY REPORT.

" The Committee have examined several gentlemen whose names are given below and who may be considered experts, and, from their evidence and other enquiries made, the Committee consider it desirable that before they finally formulate their recommendations on the whole question referred to them by the Corporation, certain schemes, which have been proposed by some of the witnesses, for remedying obvious defects which no doubt exist in the present system, should be tried experimentally in different parts of the city.

" The schemes are—

1. Recommended by Mr. J. W. Smith.
2. Do. Surgeon-Lieut.-Col. Weir.
3. Do. Mr. Gostling.
4. Do. Mr. Wallace.
5. Do. Mr. Hewson.

"The Committee therefore recommend that the Corporation should ask the Commissioner to carry out these experimental trials on such a scale as he may think necessary for arriving at practical conclusions, and further that a grant of money sufficient to defray the cost of the same should be made. Five schedules are attached, describing briefly the main points of the five schemes.

" That the President be asked to forward a copy of this report to the Standing Committee with a view to a further recommendation being made to the Corporation for a grant for defraying the cost of the experiments."

Mr. Blaney : We ought to deal with the Standing Committee's resolution.

Mr. Pherozeshah M. Mehta : That will be discussed at the Corporation. I think we should put our report as simply as possible at the outset. Every member can join in this report. I think we had better ask whether Rs. 5,000 will be sufficient for the experiments.

The Commissioner : I don't think it will.

Mr. Blaney : I have spoken to all the experts and each one has said, " I should like to see my scheme laid down and have a voice in the matter when it is laid down." In order to prevent Mr. Smith being placed in any trouble whilst going on with the work, I proposed Rs. 10,000 in order to carry out the thing successfully.

Mr. Nanabhai Katrak : That was passed without opposition.

Mr. Blaney : The experts should have their views thoroughly carried out.

Mr. Smith : When I asked for the first named sum, I did not think there were so many schemes.

Mr. Nanabhai Katrak : How about Mr. Hewson's scheme ?

Mr. Blaney : It is a very important one.

The Commissioner: I don't think Mr. Hewson's is a practical scheme, for the reason that it is too expensive. I think financial considerations are fatal. I cannot believe either that it would be good from a sanitary point of view, and I don't propose to put the idea into practice. If the Committee insist upon its being done, of course it shall be, but it is clear it is not a scheme which could be carried out throughout the city. We could not ask householders to spend double what a reasonable scheme would cost them. The question for the Committee to consider is, whether the scheme is such as to deserve consideration or not. If they don't think it is, then it ought not to be tried.

Mr. Blaney: There is another question which you have not touched upon, Mr. Commissioner. There are from ten to twenty miles of houses in Bombay with party walls and no gullies, and with which only back drainage is practical. If Mr. Wallace, or Mr. Gostling, or any other of them, has a scheme of back drainage more satisfactory than that of Mr. Hewson's, let it be carried out. But there is something in Mr. Hewson's scheme of back drainage, and it is worthy of a trial.

The Commissioner: I had not forgotten that point, that Mr. Hewson's scheme deals specifically with houses with no gullies. My objections to his scheme are on sanitary grounds.

Mr. Blaney: Give him a chance of reconsidering his scheme.

The Commissioner: That is a question for the Committee.

Mr. Nanabhai Katrak: There is the principle of the ventilating chimney which is worthy of trial.

The Commissioner: Mr. Hewson has given us no plans for houses with party walls.

Mr. Blaney: He might be asked for them.

The Commissioner: I take it that the Committee wish that Mr. Hewson's scheme should be tried as well as those of other gentlemen. My idea was that Mr. Wallace, Mr. Gostling, and Mr. Hewson should be asked themselves to supervise the work whilst it is being carried on.

Mr. Blaney: And any reasonable request they make should be granted. The gentlemen have come here and given a great deal of valuable time to the matter, and we are indebted to them.

Mr. Pherozeshah M. Mehta: I think we had better leave these details to the Commissioner. It has struck me forcibly in this enquiry that one system of connections, unless it is an elastic one, is not suitable for the whole of Bombay. Certain houses must be dealt with in one way, and certain houses in another.

Mr. Blaney: Perfectly correct. Some houses can only be ventilated in one way, and some in another.

The Commissioner: If all these schemes before us have to be carried out in their entirety, I don't think it would be safe to propose a sum lower than Rs. 10,000. It must also be borne in mind that a number of these schemes recommend themselves to me, partially but not in their entirety. They possess some details which it is desirable to possess information upon. I don't see why half a

dozen of these details cannot be tried in one scheme, but of course it is only fair to the designer that it should be carried out separately. I will endeavour to get the recommendation that Rs. 10,000 should be spent, before the Standing Committee. When I made the last recommendation, I had no idea there were more than three or four schemes.

Mr. Blaney: Mr. Smith is not going to waste our money.

Brigade-Surgeon-Lieut.-Col. Banks: Mr. Smith's estimate of Rs. 4,000 was given under a wrong impression.

Mr. Viegas: I have only to say that, if at the outset we are satisfied that any one scheme is impracticable, it is useless to waste money upon it. We should not try it for the sake of trying.

Mr. Pherozeshah M. Mehta: We cannot say any of the schemes are impracticable.

Mr. Blaney: Mr. Viegas is afraid the Commissioner will do something absurd. I have not the slightest fear, for I have never seen him try the impractical yet.

Mr. Blaney: I don't think there is any fear. There is only one thing more. I want to know whether Mr. James' scheme satisfies Dr. Weir's sanitary views. Of course, it is not necessary for Dr. Weir to give us a scheme, but it ought to be communicated to him that if Mr. James' scheme is his scheme and no modifications are required, he can carry it out. As Health Officer I should like to bind him to a scheme.

Mr. Bhalchandra K. Bhatawadekar: I understood that the red model was Dr. Weir's scheme, and that Mr. James only put it together.

The Commissioner: Dr. Weir had nothing to do with it. The red model has been in the office for years. Dr. Weir, however, approves of that model, barring some details; he would put a catch-pit where you now see a running siphon. Those who have studied Mr. Hewson's scheme will see that there is a danger from the fact that the pipe sewers lead directly into the house.

Mr. Nanabhai Katrak: The pipes are outside.

The Commissioner: I am perfectly aware of that, but the pipes communicate directly with the privies. I do not like the responsibility of carrying that out. Dr. Weir's scheme is not so dangerous, as the pipe only leads to the gully, and not to the house.

The President read the following letter from Mr. Hewson:—

BOMBAY, 1, HUMMUM STREET,
2nd September 1892.

H. W. BARROW, ESQ.,
Secretary, Sub-Committee considering
House Connection Drainage.

SIR,—From the proof proceedings of the 23rd August received by me last evening, I find the Commissioner stated after I left the meeting, that my plan was not practicable. I am sorry I was not questioned on this point, as the present gully paving and pipes would all be re-used.

I would ask the Committee to consider that only 30 per cent. of the houses in the city have side gullies to which the proposals of Mr. Gostling and Mr. Wallace would apply, and what is to be done for the 70 per cent. having only a sweeper's passage at the back, or no gully at all. My plan is adaptable to any condition of property in the city.

I have, &c.,

JOHN HEWSON, A.M.I.C.E.

The President: Is it agreed that we should apply for Rs. 10,000?

The motion was agreed to.

The Commissioner: By the way I may mention that the Health Officer, Executive Engineer and myself have been considering the drainage of the new halalcore chawls in Cursetji Suklaji Street, and we have decided on a system of drainage which will, to a great extent, carry out Dr. Weir's ideas, the only difference being the running syphon between the sewer and the street and catch-pits of masonry, iron and zinc. Masonry gets much knocked about, whilst zinc is much cleaner but more expensive. I should like to know distinctly from the Committee, in view of the objections I have to Mr. Hewson's scheme, do they wish it to be carried out, because it represents a serious danger. Where a six-inch pipe leads from a sewer straight to a privy, it is a great danger.

Mr. Blaney: But Mr. Hewson will recognize that difficulty if it is pointed out to him. There is one point of vital importance, and that is that these experiments be made in large tenement houses.

Mr. Pherozeshah M. Mehta: Let us settle the point raised by the Commissioner.

Mr. Nanabhai Katrak: Mr. Hewson has two settling tanks below the mouth of the pipe.

The Commissioner: The mouth of the pipe drain will be a danger.

Mr. Pherozeshah M. Mehta: Let Mr. Hewson amend his scheme on that point.

Mr. Blaney: I think it would be useful if the members of the Committee poked their noses in occasionally whilst these experiments are being carried out.

Mr. Pherozeshah M. Mehta: Perhaps the Commissioner will be good enough to keep members of the Committee informed of what is going on.

Mr. Viegas: I think it is desirable that this Committee should enter some of the houses and see what there is about the smells.

The Commissioner: I will keep the Committee informed.

Mr. Viegas: We ought to go to the houses.

The Committee then adjourned.

HOUSE-CONNECTIONS REPORT.

SCHEDULE I.

Registered Plan No. 3044 *of* 17*th July* 1892.

The modifications are as follows:—

(*a*) No gratings in *nahanis*.
(*b*) Larger pipes, 3″ instead of 2½″.
(*c*) Larger cistern heads with wire covers.
(*d*) Down-pipes and gully traps placed further away vertically from the position of the *nahanis*.
(*e*) The sloping pipe between each *nahani* and the cistern head provided with an open slit ½″ wide.
(*f*) An open trough or channel provided with a catch-pit and a grating, placed at the foot of each down-pipe, the catch-pit overflowing into a gully trap.

Modified Design No. 2.

Registered Plan No. 3050 *of* 18*th July* 1892.

The modifications are as follows:—

(*a*) A siphon trap in each *nahani*.
(*b*) Larger pipes, 3″ instead of 2½″.
(*c*) No cistern heads.

The success of this system depends upon the house-owners themselves keeping clean the siphon trap in the *nahani*.

Modification Design No. 3 for Detached Ranges of Chals.

Registered Plan No. 3062 *of* 18*th August* 1892.

The modifications are as follows:—

(*a*) No gratings in the *nahanis*.
(*b*) Larger pipes, 3″ instead of 2½″.
(*c*) Sullage discharging into an open channel.

JAMES W. SMITH, M.I.C.E.,
Acting Executive Engineer.

SCHEDULE No. 2.

No. 15485 of 1892-93.

Bombay, 5*th September* 1892.

From the EXECUTIVE HEALTH OFFICER,
To The MUNICIPAL SECRETARY.

Sir,—In reference to your letter No. 5864 of the 3rd instant which I acknowledge with thanks, I have the honor to inform you that I do not think it is necessary for me to submit any definite "Schedule." My proposal is shown in the model, except in so far that the gully should discharge into a catch-pit not less than 12 × 12 and not into a trap of the form shown at the end of the model.—I have, &c.,

T. S. WEIR,
Health Officer.

BOMBAY MUNICIPALITY.

SCHEDULE No. 3.

BOMBAY, *3rd August* 1892.

H. W. BARROW, Esq.,
Municipal Secretary,
House-connections Committee.

DEAR SIR,—I am in receipt of your letter of the 3rd instant, asking me to send you a detailed description of the house-connections I propose to construct.

2. As requested, I now give a short description of my proposal.

3. I proposed, in my evidence before the Committee, to construct an open gutter six inches wide, the ovoid bottom of which should slope from the upper to the lower end of the gully to its junction with the street drain pipe. The width of the gutter at the top to be a narrow gap of three inches wide between the paving stones. Upon further thinking out and developing my proposal, I now find that I am able to cover over and shut up this gap with cover-stones constructed of a particular shape, which will have the effect of making the gutter—not an open gutter, but a closed gutter—into which no *kuchra* or refuse can fall, and which, therefore, will seldom require cleaning, as the scour of the flow of the water flowing in the gutter will keep it clean. The cover-stones I now propose to use will be removeable along the whole length of the gutter at any moment, so that the gutter can be cleaned at any time and in any part where necessary. The orifice of the gutter I now propose to be four inches wide instead of three inches as formerly proposed.

4. As soon as the gutter has been examined after opening, the cover-stones will be refixed automatically into the place formerly occupied by them, *i.e.*, the stones will fall into certain close fitting joints specially prepared for them on all the four sides and will retain their position without any chunam or other cementing material being used or necessary. These joints will be practically air-tight and water-tight, *i.e.*, I shall cut them of certain geometrical shapes into which they will naturally socket when laid in place by the *halalkhor* who has lifted them. I should also mention that these cover-stones will be too heavy for an ordinary person, such as a house-owner to move unless he puts forth his strength, but they are not too heavy for a *halalkhor* to lift, who is accustomed to laborious work. Each stone will have a handle carved into it at each end for the purpose of lifting by the two hands.

5. The joints will be practically water-tight and air-tight, because I shall cut the geometrical pattern of the joints so truly fitting to a template as that a small quantity of dust in entering the joint will close it up against the admission of water and the emission of air, and also the admission of any refuse.

6. I propose to cut on each side of the cover-stone two grooves in the paving stones along which the rain-water will flow. The paving stones and the cover-stones to be in one level crossways and to slope as necessary from the rear of the gully to the street. The

bottom of the gutter to slope as necessary from the rear of the gully to the street sewer pipe.

7. By this arrangement now proposed by me there will be a perfect separation of storm-water from sullage ; the rain-water pipes will flow in the grooves just mentioned on the top of the paving stones, and the water from the *morees* will flow into the gutter I have above described. The arrangement of *moree* pipe shown in the full-sized model in the Corporation Hall is the one I would adopt. It cannot be improved upon. No *syphons* to be used anywhere to these pipes. The *moree* pipe, which I propose should be three inches diameter, to be led into a branch gutter constructed just as above described through a fixed cover-stone. The hole in the cover-stone to be five inches diameter, so that there will be an air space one inch all round the pipe for the exit of any possible sewer gas. I should not mind if the *moree* pipe fitted close into the gutter—as I do not expect that under my system there will be any sewer gas in the gutter—but this is a small detail which further experience will decide.

8. I propose this system of gutter for privies also, for which it is equally suited whether the privies have the soil-basket or are constructed on the new system of water carriage.

9. At the end of the gully next the street to be constructed a catch-pit close to the running syphon. To be oblong in shape, nine inches wide by two feet long, 1′ 6″ below the floor of the drain, with a semi-circular bottom from front to back.

10. An iron *kachra* or refuse pipe to be constructed to receive the *kachra* from each room separately tenanted. The pipe to have a semi-circular front, to measure on the inside ·9″×·9″ To be fixed to the wall by two strips of wood each measuring ·3″×·3″, which would form a portion of the pipe.

11. A small hole ·4″×·4″ to be made through the wall from each room on each floor into the pipe. The *kachra* and the children's excrement picked up from the *moree* would be passed through this hole into the pipe by hand, or pressed through by a stick. The pipe to be made of thin galvanised iron, bent to shape and nailed in position. In order that the pipe may form no obstruction in the passage, the bottom of the pipe should cease at the height of seven feet above the floor of the passage ; the contents dropping down the pipe would thus be deposited in a heap at the bottom of the pipe, and would thus make it possible for persons to use the gully or passage without the fear of unsightly or filthy materials being thrown upon them from the windows.

12. I would like to drain one gully on this system in the European part of the Fort, and one gully in the native town. I understand that there are a number of gutters inside the houses in Bazar Gate Street which have no gullies. I would also like to reconstruct one of these gutters on this principle.—I am, &c.,

DAVID GOSTLING, F.R.I.B.A., F.S.A.,
Architect.

SCHEDULE No. 4.

Note of Evidence given by Mr. John Wallace, C.E., before the Committee of the Bombay Municipality on House-connections.

The accompanying sketches, which are not to scale, represent the appliances described by Mr. Wallace.

He recommended that no openings should exist on a down-take pipe outside a house except at the top and at the bottom. The bottom end of the pipe to be sealed by a catch-pit and the top terminating in a ventilator as shewn in Fig. 2.

Instead of a wall siphon a flat slab of stone might be used over the *nahani* grating to close the pipe against the discharge of gas into the house.

In some cases a ball-valve might be used instead of a wall siphon where a self-acting cut-off was required. This ball-valve is of copper and rests in a metallic or earthenware chamber. When water enters the chamber, the ball which is hollow floats, letting the water and any solid matter it may carry with it pass away by the pipe beneath. The ball then falls into its place, preventing the passage of gases or vermin.

In Fig. 1 a strong grating is fixed in the *nahani* to prevent the passage of any solid material large enough to block the pipe.

When water is discharged from any *nahani*, it carries air with it in the down-take pipe, which would escape at the bottom were it not for the seal or an equivalent device. This foul air escapes laterally into the ventilating pipe, and thence to the roof. The down-take pipe terminates on a level with the highest *nahani*, and is closed with a lid which gives access to a brush for cleaning the pipe. The brush Fig. 3, is loaded at the bottom and worked from a pulley at the end of a bamboo. The pulley has a special frame which rests on the top of the pipe and steadies the pulley. Brushing may be done from the nearest window on either side of the gully.

Brushes of special fibre may be made to order at Cawnpore. The best coating for the interior of the pipes is probably that named after Dr. Angus Smith. It is in all the Bombay water pipes. It could be applied or renewed in Bombay, and the residue of tar could be utilised with boiler or foundry slag as paving.

Mr. Wallace thinks it possible to design a valve for the bottom of the down-take pipe which would be self-acting, and which would not be fitted with the objectionable hinge. This valve, which would cost less than a catch-pit, might be used if the catch-pit were found unsuitable.

He strongly recommends that careful observations be made upon the force and velocity of the currents of air and gas in the down-take pipes and in the sewers.

APPENDICES.

SCHEDULE No. 5.

5th September 1890.

Statement (brief) of Mr. Hewson's plan of house-connection drainage suitable for four distinct classes of native house property as existing in the City of Bombay—

(*a*) Houses having side and back gullies.
(*b*) Houses having side gully only.
(*c*) Houses having back gully only.
(*d*) Houses having no gully.

(*a*) *Houses having side and back gullies.*

The sullage flows from the *nahanies* by 3" discharge pipes, sullage heads, and cast-iron down-take pipes into a paved side gully V shape, having a fall from the street to the back of the house; the sullage flowing into two catch-pits A and B (see plans submitted to Corporation Sub-Committee) built at the bottom of a ventilating shaft 3'-0" × 3'-0" and 5 feet higher than the house, or adjoining building, the sullage flowing from catch-pit B by a 6" running syphon and pipe laid underneath the paved gully direct to the sewer. The sullage from the back of the house flows in the same manner into catch-pits A and B. A door 4'-0' × 1'-6" is fixed at the back of the ventilating shaft by which the sweeper clears away the heavy deposit from the catch-pits.

(*b*) *Houses having side gully only.*

The arrangement is the same as for (*a*); only no sullage is taken from the back gully, and the door to ventilating shaft for the purposes given in (*a*) would be in the front.

(*c*) *Houses having back gully only.*

The sullage would flow into the gully as described in (*a*) and flow into two catch-pits A and B at the bottom of a ventilating shaft 3'-0" × 3'-0" built at the side of the privy in place of the air shaft required by the Municipal Act. The sullage would flow from catch-pit B by a 6" running syphon and pipe into a 9" pipe laid underneath the gully and connected to the sewer. A door would be provided at the bottom of the ventilating shaft as described in (*a*) for the sweeper to clean away heavy deposits from the catchpits.

(*d*) *Houses having no gully.*

The sullage would flow from the back of the house into two catch-pits A and B built at the bottom of a ventilating shaft 3'-0" × 3'-0" and flow by a 6" running syphon and pipe underneath the building direct to the sewer in the street. A door is fixed at the bottom of the ventilating shaft as described and for the purpose mentioned in (*a*).

The ventilating shaft has no connection whatever with the house; all sewer gas from the drains and catch-pits flow up the ventilating shaft and above the houses.

Privies from two houses could be cleared and drained from and into the ventilating shaft (see plans before Corporation Sub-Committee).

Details as to *nahani* discharge pipes, special designed sullage heads, arrangement of down-take pipes and ventilation of drain into ventilating shaft are not given in this paper.

JOHN HEWSON, A.M.I.C.E., M.S.A.

Accompaniment to Appendix E prepared by the Municipal Secretary as per Proceedings of the House-Connections' Committee, 8th July 1892.

HOUSE CONNECTIONS.

Extracts from the Report of the Special Commission on the Drainage and Sewerage of Bombay, dated 22nd January 1878.

"The Commission consider the system of privies and house connections as designed by Mr. Walton, which is now at work in Sonapur and Dukerwady, to be generally suitable for present purposes; but doubtless, as time goes on, an improved class of water closets will be generally adopted in the better class of native houses. In the latter case, the Commission would recommend that the adoption of a standard type of closet suitable to the customs of the natives be enforced, the type being modified from time to time as experience may suggest.

"For the poorer classes, to whose houses it will in many cases be impossible or injudicious to attach house connections, public latrines and urinals should be provided. The cost of these should, it is considered, be entered in the drainage scheme, as well as a considerable sum for the cost of house connections, which, experience shows, cannot be recovered from the poorer class of householders. The Commission consider that a sum of five lakhs of rupees should be entered in the estimate for these items."—(Para. 7, page viii).

"The Commission consider that Mr. Walton's estimate for the scheme, *viz.*—Rs. 37,37,600, may be accepted; but to this the following sums should, in their opinion, be added:—

Extra cost of building invert and side walls in Portland cement...	Rs.	2,00,000
House connections and public latrines... ...	„	5,00,000
Puddling Vellard	„	50,000
Sub-soil drainage low-lying parts	„	1,00,000
	Rs.	15,87,600

say, 46 lakhs.

"The Commission are thus of opinion that the proposed scheme can be carried out in its entirety within the sum—50 lakhs—laid down in the Government Resolution."—(Para. 13, page xiv).

"That house connections with sewers should, as far as possible, be on the broken joint system."—(Page xv.)

"That a standard type of water closet be enforced."—(Page xv.)

Resolutions of the Corporation, Town Council and Standing Committee.

In a report by the Municipal Commissioner to the Town Council, dated 5th March 1878, it was proposed that a sum of Rs. 5,00,000 be entered for the cost of house connections and public latrines.

Resolution of the Town Council, No. 2299, *dated 6th June* 1880.

Considered letter No. 5407 of 1880, from the Acting Municipal Commissioner, requesting sanction to the employment of an establishment, at a cost of Rs. 880 a month, for six months, to examine buildings, collect information, and make investigations generally, with a view to a system of house connections with the drainage scheme being drawn up, *viz.*, 10 surveyors at Rs. 60 each per mensem, Rs. 600 ; 30 lascars at Rs. 8 per mensem, Rs. 240 ; 1 clerk at Rs. 40 per mensem, total Rs. 880 per mensem, or Rs. 5,280 for six months.

Proposed by Rao Saheb Vishvanath Narayan Mandlik, seconded by the Chairman—

"That the consideration of the proposal of the Municipal Commissioner be postponed, and that he be requested to submit an estimate of an establishment for the survey of the sewerage system of Cammatteepura

with the view of immediately carrying out the terms of the Resolution passed by the Corporation on the 31st October 1879."

Carried.

Resolution of the Town Council, No. 2529, *dated* 15*th June* 1880.

Considered the following :—

To The SECRETARY, TOWN COUNCIL.

Sir,—I beg to give notice that at the regular weekly meeting of the Town Council to be held on Tuesday, the 8th instant, I will propose the following resolutions :—

"That the third division of the drainage scheme, namely, the house connections, including privy alterations, not having yet been prepared or submitted to the Corporation, no provision of funds has been made for this work. It is essentially necessary for the success of a night soil system of sewerage in this country that this portion of the system should be executed by the Municipal Engineer and at the cost of the Municipality. That the Municipal Commissioner be therefore requested to prepare and submit, with as little delay as possible, an estimate of the cost of the work for the part of the drainage system which has already been sanctioned."—I have, &c., THOMAS BLANEY, Chairman, Town Council, 3rd June 1880.

Proposed by the Chairman, seconded by C. Douglas, Esq.—

"That the Municipal Commissioner be requested to prepare and submit, with as little delay as possible, a scheme for, and an estimate of, the cost of the house connections and privy alterations for that part of the drainage system which has been already sanctioned, it being understood that no increased expenditure be thereby incurred."

Carried.

Resolution of the Town Council No. 2837 *of* 27*th July* 1880.

Considered memorandum No. 6877, dated 30th June 1880, from the Acting Municipal Commissioner, enclosing copy of Government Resolution No. 1783 of 1880 (General Department), forwarding, with request that the same may

be laid before the Town Council, letter from the Sanitary Commissioner, dated 14th June 1880, bringing to notice Resolution passed by the Council on the 1st idem deferring the consideration of the Municipal Commissioner's proposal for employing an establishment to make investigation on the subject of house connections, and requesting the Commissioner to submit an estimate of the extra establishment required for the survey of the sewerage system of Cammatteepura, with a view of immediately carrying out the terms of the Corporation's Resolution, dated 31st October 1879, (sanctioning the removal of the earthenware pipes from the centre of the cross streets, relaying them in the gullies at the back of the houses, and erection of three shaft ventilators over the two main brick sewers); remarking that the scheme of improving the Cammatteepura drainage contemplated by the Council is impracticable, and that the money spent thereon will be literally thrown away; requesting that Government will be pleased to take such action as may be necessary to urge the abandonment by the Municipality of measures so fatal to the success of the drainage scheme; and pointing out to the Municipality that it would be a waste of money to try and to do anything with the present drainage of Cammatteepura.

Also the following :—

BOMBAY, 15*th July* 1880.

To H. W. BARROW, Esq., Secretary to the Town Council.

SIR,—I beg to give notice that on the consideration of the Government Resolution forwarding a communication from the Sanitary Commissioner, dated 14th ultimo, regarding the drainage system of Cammatteepura, it is my intention to ask the Acting Municipal Commissioner to state for the information of the Town Council the circumstances which led to the adoption of the drainage system for Cammatteepura, the officer who prepared the scheme, its estimated and actual cost; and further to report to the Council if the said scheme has proved a failure, and if the sum of Rs. 67,612 proposed to be spent for improving the drainage of the said district would be wholly wasted and thrown away, as alleged by the Sanitary Commissioner of this Pesidency.—Yours faithfully, NOWROJEE FURDOONJEE, Member of the Town Council.

It was agreed that the consideration of these papers be postponed.

APPENDICES.

Resolution of the Town Council No. 3019, *dated* 17*th August* 1880.

Read the following :—

No. 9002 OF 1880.

MUNICIPAL COMMISSIONER'S OFFICE,

BOMBAY, 17*th August* 1880.

TO THE SECRETARY, Town Council.

SIR,—In order to ascertain the exact position of the privies and house connections in the new Drainage District, and the length of pipes that will be required for them, I have the honour to request the sanction of the Town Council to the entertainment of the following extra establishment to be employed under the Executive Engineer on special duty for six months.

The total cost will amount to Rs. 5,280, which may be sanctioned from the Drainge Loan.

10 Surveyors at Rs. 60 each	Rs.	600
1 Clerk at Rs. 40	„	40
30 Lascars at Rs. 8 each	„	240
Total per month Rs.		880

I have, &c.,—J. H. GRANT, Municipal Commissioner.

Resolved : "That sanction be given to the expenditure of Rs. 880 per mensem for six months from the Drainage Loan for the cost of surveying position of privies and house connections and of lengths of pipes required for the same in the new Drainage District."

Resolution of the Town Council No. 3019*A, dated same day.*

The Municipal Commissioner handed in the following return with reference to the Council's Resolution No. 2732 of 1880 :—

Statement showing the number of buildings in Elphinstone Circle in which water closets are now actually in use, and the number of stories in each building in which they are so used ; also the number of buildings and stories in which they have been disused and the reason why, with the present condition of water supply for flushing the closets :—

Recorded.

E A G

Buildings.	Water closets now actually in use.	Stories in each building where water closets are so used (including ground floor.)	Buildings.	Water closets disused.	Stories in each building which buildings where water closets are so disused (including ground floor).	Why disused.	Present conditions of water supply for flushing water closets. A.—Ample. I.—Insufficient. T.—Totally inadequate.
1	6	3	1	1	1	Closed 2 years ago on account of smell	A.
1	None †	.....	...	W. C. recently removed.	.....	On account of nuisance ...	O.
1	1‡	4	1	1‡	1	Not required for use now ...	A.
1	6	3	1	2 W. C. removed recently.	.....	Not required	A.
1	6	4	1	1	1	Occupier absent	A.
1	6	4	1	1	1	Do. do.	A.
1	4§	3	...	.....	.....	.....	
1	3	3	1	1	1	Closed 5 or 6 years ago on account of insufficiency of water and on account of smell.	A.
1	3	3	...	.....	.....	.....	A.
1	6	5	...	.....	.....	.....	A.
1	7	5	...	.....	.....	.....	A.
1	11	5	1	2	1	Not required for use ...	A.
1	11§	5	1	1	1	Not required, no tenants ...	A.
1	7	3	...	.....	.....	.....	A.
1	8	5	...	.....	.....	.....	A.
1	4	4	...	.....	.....	.....	A.
1	4	2	1	1	1	Not required, no tenants ...	A.
	92			9			

† Port Trust Office. ‡ One removed six months ago at tenant's expense on account of smell. § Native privy, 2 seats ground floor.

R. P. BRUNTON, Assistant Health Officer, in Charge Health Department.

Recorded.

Resolution of the Corporation No. 1194, *dated 25th February* 1881.

In accordance with notice of motion, the Chairman asked the Acting Municipal Commissioner to inform the Corporation as to what progress has been made to give effect to the following resolution of the Town Council No. 2529, dated the 15th of June 1880, and No. 3019, dated the 24th June 1880.

"That the Municipal Commissioner be requested to prepare and submit, with as little delay as possible, a scheme for, and an estimate of, the cost of the house connections and privy alterations for that part of the drainage scheme which has been already sanctioned, it being understood that no increased expenditure be thereby incurred."

Resolved: "That sanction be given to the expenditure of Rs. 880 per mensem for six months from the Drainage Loan, for the cost of surveying position of privies and house connections and of lengths of pipes required for the same in the new Drainage District:—

10	Surveyors at Rs. 60 each.....	Rs. 600
1	Clerk at Rs. 40.....	„ 40
30	Lascars at Rs. 8 each	„ 240
	Total per month	Rs. 880"

The Acting Municipal Commissioner stated that an application was now about to be submitted to the Town Council to sanction the establishment being employed for a further period of seven months. He explained that over 1,100 houses had been surveyed, and that owing to the fact of some of the surveyors being employed on work other than that of the house survey, the progress had not been so great as was anticipated; the difficulties also met with in the survey of houses was greater than was expected. Some of the surveyors had been employed on the drainage works for a short period, another had been sent on emergent duty to Tulsi, and others had been employed in preparing plans and estimates in connection with the prosecution of the drainage works. After some remarks, the Acting Commis-

sioner handed in the following letter from the Acting Executive Engineer on this subject :—

No. 716 OF 1881.

BOMBAY, 15*th February* 1881.

To THE MUNICIPAL COMMISSIONER.

SIR,—With reference to the resolution of the Town Council No. 3019, of the 24th August 1880, sanctioning the employment of 10 surveyors, 30 lascars and 1 clerk for six months to make surveys, &c., for the house connections for the sanctioned portion of the drainage scheme, I have the honour to state that the six months expires at the end of this month, and request that the staff be continued until the 30th of September next.

2. During the monsoon months the staff at present employed on the superintendence of the Drainage works now under construction, will be available to prepare the estimates on the surveys of the house connection staff. The house connection staff are not sufficiently experienced to prepare these estimates, which must be carefully and accurately done.

3. The cost of continuing the house connection staff until the end of the next monsoon can be met from the Drainage Loan.—I have, &c., C. B. BRAHAM, C. E., Acting Executive Engineer on Special Duty.

Town Council's Resolution No. 1244, *dated* 1*st March* 1881.

Read memorandum No. 2079, dated 25th February 1881, from the Acting Commissioner, asking the Council to sanction the continuance of the employment for seven months more (from 1st March to 30th September 1881) of the staff sanctioned by the Council on 24th August 1880, for surveying position of privies and house connections in the new drainage districts. The charge, Rs. 880 per month, to be met from the new Drainage Loan, as follows :—

10 Surveyors at Rs. 60 each	Rs.	600
1 Clerk	„	40
30 Lascars at Rs. 8 each	„	240
	Rs.	880

Proposed by the Hon'ble Rao Saheb Vishvanath Narayan Mandlik, seconded by Rahimtula M. Sayani, Esq.—

"That before sanction is given to the continuance of the employment of staff for surveys of position of privies and

house connections, the attention of the Acting Municipal Commissioner be drawn to the following statement made by the Executive Engineer in his letter No. 1193, of 19th April 1880:—'I estimate the number of house connections at 5,700, and that one surveyor would be able on an average to inspect four houses. At this rate 10 surveyors would require 143 days, or about 5 months, to complete the reference. That as a tentative measure the employment of the present establishment be sanctioned for two months from this day, and that the Acting Municipal Commissioner be requested to furnish the Council with a weekly report showing the actual work done week by week.'"

Carried.

By Town Council's Resolution No. 3320, *dated 26th April* 1881,

sanction was given to the payment of Rs. 880 from the new Drainge Loan, for the further employment, from 1st to 31st May next, of staff for the survey of positions of privies and house connections, as under :—

10	Surveyors at Rs. 60 each	Rs. 600
1	Clerk	„ 40
30	Lascars at Rs. 8 each	„ 240
		Rs. 880

Resolution of the Town Council No. 3512, *dated 3rd May* 1881.

Ordered: "That the papers regarding the house connections be circulated, and that the Municipal Commissioner be asked to furnish a report from the Executive Engineer on Special Duty, showing briefly the actual work done to date in connection with the survey, accompanied by an estimate of the probable total cost of the construction of the connections along the portion of the main drainage works now in course of completion."

Town Council's Resolution No. 4297, *dated* 31*st May* 1881.

Read memorandum No. 5568, dated 26th instant, from the Commissioner, forwarding, with reference to Town

Council's Resolution No. 3512, dated 3rd idem, letter No. 1962, dated 14th instant, from the Executive Engineer on Special Duty, stating that the Progress Report of the actual work done in connection with the house connection survey to 14th May, will be submitted shortly; adding that he cannot yet supply a reliable estimate of the probable total cost of the construction of the connections along the portion of the main drainage works.

Recorded.

Town Council's Resolution No. 5230, *dated* 28*th June* 1881.

No. 5230. Considered memoranda Nos. 6675, 6676, 6677, and 6678, dated 24th instant, from the Commissioner, forwarding Progress Reports of the house connection work for the weeks ending 14th, 21st and 28th May and 11th June 1881; showing that the number of houses surveyed up to 11th instant was 2,697, ditto of which quantities were estimated 2,037.

Recorded.

Town Council's Resolution No. 7593, *dated* 7*th October* 1881.

No. 7593. The consideration of the following papers was postponed:—Letter, dated 27th April last, from Mr. T. A. Bulkley, and papers relating thereto (see Town Council's minutes of 3rd May last), regarding nuisance existing along the Kennedy Seaface from the outfall of certain large sewers into Back Bay between Marine Lines and Churney Road.

Town Council's Resolution No. 7594, *dated* 7*th October* 1881.

No. 7594. Read memorandum No. 9366, dated 30th September 1881, from the Commissioner, forwarding Progress Report by the Executive Engineer on Special Duty, of house connection work for the week ending 10th idem. (The return shows that the total number of houses surveyed up to 10th September last was 3,876; that the total number of connections estimated for up to that date was 2,481; that the number of houses remaining

to be surveyed up to ditto was 1,821 ; and that the number of connections remaining to be estimated for ditto was 3,219.)

Recorded.

Town Council's Resolution No. 7830, *dated* 14*th October* 1881.

No. 7830. Considered memorandum No. 9549, dated 7th instant, from the Commissioner, forwarding Progress Report by the Executive Engineer on Special Duty, of house connection work for the week ending 27th August last. The return shows that the total number of houses surveyed up to 27th August last was 3,666 ; and that the number of houses remaining to be surveyed up to ditto was 2,034 ; and the number of connections remaining to be estimated for ditto was 3,309.

The Executive Engineer on Special Duty makes the following statements as to the non-preparation of estimates between 20th and 27th August :—

1. During this period only the ordinary office staff was employed on the house connection survey, and only four surveyors could be spared from other works. Since the appointment of the special house connection staff, care has been taken to keep them to that work alone.

2. Of the four surveyors employed, one was sick the whole week, and another one day, one was three days, inspecting the progress of the new drain in Khetwady 10th lane, and another was two days, measuring up and estimating an omitted line of pipe sewers.

3. During the week only the equivalent of 12 days' work of one surveyor was devoted to the house connection survey.

4. It happened that the survey of no single block was completed, and consequently nothing was ready for estimating. The custom is to survey a block and then to make out the estimate of it in office from the survey book. It may therefore possibly occur that at one time all the surveyors may be surveying and at another time all may be estimating.

Also memorandum No. 9548, dated 7th instant, from the Commissioner, forwarding Progress Report by the Executive

Engineer on Special Duty, of house connection work for the week ending 3rd September last. The return shows that the total number of houses surveyed up to 3rd September last was 3,713 ; that the number of houses remaining to be surveyed up to ditto 1,987 ; and that the number of connections remaining to be estimated for ditto was 3,309.

The Executive Engineer on Special Duty makes the following statement as to the non-preparation of estimates between 27th August and 3rd September last :—

1. Paras. 1 and 4 of the explanation of work done during the week ending 27th August 1881 are applicable to this work also, except that during the latter period seven surveyors were put on the house connection work.

2. Of these seven men, one was sick for three days ; one was five days inspecting the progress of the new drain in Khetwady 10th lane ; one was five days preparing drawings for the new privies in the Municipal Office ; and another was five days estimating the work in the chimney shafts for Pumping Station ; one was four days obtaining information from Colaba as to the rainfall of years past, preparing tables of the same for the surface drainage scheme, and assisting in the estimate of work remaining to be done by the pipe sewer contractors ; and another was four days drawing details of the top of the new chimney shafts for Pumping Station ; one was three days making a section of and estimating the work in Tulsi dam No. 2 ; and one was two days preparing drawings for the new chimney shafts for the Pumping Station.

3. During the week only the equivalent of eleven days work of one surveyor was devoted to the house connection survey.

Also memoranda from the Commissioner, forwarding Progress Reports by the Executive Engineer on Special Duty, of house connection work for the weeks ending 17th and 24th September last. The returns show that the total number of houses surveyed up to 24th ultimo was 4,059 ; that the total number of connections estimated for up to 24th ultimo was 3,067 ; that the number of houses remaining to be surveyed up to ditto was 1,641 ; and that the number of connections remaining to be estimated for up to ditto was 2,633.

The Commissioner informed the Council that he has called for a report showing the details of the work done in connection with the completion of these surveys; and the Council ordered that the reports now under consideration be laid on the table.

Resolution of the Town Council No. 8994, *of 2nd December* 1881.

Considered the following:—

No. 10794 OF 1881.

BOMBAY, 26*th November* 1881.

MEMORANDUM.—The accompanying correspondence on the subject of fittings for the experiment to be made in Cammatteepura in connection with the sewerage scheme, is forwarded for the perusal of the Town Council.

Many members of the Corporation have expressed surprise at the delay in carrying out the sanctioned experiment, but no one can regret the delay more than the Municipal Commissioner himself does. It could not, however, be avoided.—E. C. K. OLLIVANT, Municipal Commissioner.

No. 3206 OF 1881.

BOMBAY, 3*rd November* 1881.

To E. C. K. OLLIVANT, Esq., C.S.,
Municipal Commissioner.

SIR,—With reference to the conversation I had with you the other day on the subject of the experiments in house connections to be made in Cammatteepura, I beg to forward for your information the accompanying copy of a letter received from Messrs. Burn & Co. of Sukkur and Calcutta, to whom the order for 12 soil pans for the experiments was given, and to state that in consequence of the representations therein made, considerable delay will be caused before the experiments can be made.—I have, &c., RIENZI WALTON, M.I.C.E., Executive Engineer on Special Duty.

Recorded.

No. 1983.

7, HASTINGS STREET,
CALCUTTA, 24*th October* 1881.

R. WALTON, Esq., C. E.,
Engineer to the Bombay Municipality.

DEAR SIR,—We are in receipt of a telegram from our agent at Sukkur, inquiring about the privy pans we have in hand for you.

We must apologise for the delay that has taken place, but our manager stupidly, in sending a quotation of the cost of the pans to our agent at Sukkur, returned the plans, and our agent there, in

forwarding your order, neglected to send us the plans at the same time, hence the delay.

Our manager writes to say, that he, immediately on receipt of the drawings, put the work in hand, and is doing his utmost to push forward towards completion ; but fears he will not be able to despatch them much before the end of November. The pans are a little complicated in structure, and consequently take time to mould and dry before we can burn them. The latter operation alone will take three weeks. We are very sorry that any delay has taken place, and trust you have not been inconvenienced. We will see that no time is lost in pushing them on.—We are, etc., BURN & Co.

LAMBETH POTTERY,
LONDON, S. E. 16*th September* 1881.

RIENZI WALTON, ESQ., C. E., Bombay.

DEAR SIR,—We beg to acknowledge the receipt of your favour No. 2825 of 22nd ultimo, with drawing of stoneware privy pans required for your Municipality, and are much obliged.

We will at once give our attention to the matter and put in hand the samples you desire to be forwarded, and after we have made one or two, we shall be in a position to judge of their cost, and will then write you further with the requisite quotation of our price for these articles. Meanwhile we are, &c., HENRY DOULTON & Co.

Recorded.

Read also the following :—

No. 8952 of 1881.

TOWN COUNCIL OFFICE,
BOMBAY, 25*th November* 1881.

TO THE COMMISSIONER.

The undersigned has the honour to state that at the meeting of the Town Council held this day, Progress Reports, by the Executive Engineer on Special Duty, of house connection work for the weeks ending 22nd and 29th ultimo were read.

The Commissioner stated that at an early meeting of the Council he will report on the subject of house connection surveys.—H. W. BARROW, Secretary, Town Council.

No. 10967 of 1881.

Annexed letter from the Executive Engineer, Mr. Walton, with two statements, is forwarded to the Secretary to Town Council with reference to the above extract of minutes.

The sum to be sanctioned at present will be the total of the first statement, viz., Rs. 5,43,966, with 15 per cent. in addition to cover charges for establishment and contingencies, that is, in all Rs. 6,25,561.

E. C. K. OLLIVANT,
Municipal Commissioner.

2*nd December* 1881.

No. 3423 of 1881.

BOMBAY, 1*st December* 1881.

To E. C. K. OLLIVANT, Esq.,
Municipal Commissioner.

SIR,—I have the honour to report that the survey for the house connection and privies to all houses situated at the first portion of the drainage scheme has been completed, together with the plans, quantities and estimates for the same.

2. The abstract showing the quantities and estimate for both works is herewith forwarded.

3. The estimated cost of the house connections is Rs. 5,43,966 and Rs. 2,15,814 for the privies; neither estimate, however, includes any percentage for contingencies or establishment.

4. The number of houses is 5,804 instead of 5,700 as we previously supposed to be the case, and was so reported to you in my No. 2947, dated 20th September 1881. In that report I estimated the total cost of the house connections at Rs. 5,47,200. The amount sanctioned under your No. 9354, of 30th September 1881, for the completion of this survey, was Rs. 3,520; out of this Rs. 2,293-2-0 has been expended, thus leaving a saving of Rs. 1,226-14-0.

5. The whole of the staff engaged for this work has been discharged.—I have, &c.,

RIENZI WALTON,
Executive Engineer on Special Duty.

MUNICIPALITY—CITY OF BOMBAY.

Estimate No. *of* 1881.

Framed by the Executive Engineer, Municipality, of the probable cost of making Nani connections with Pipe sewers in the first portion of the drainage scheme for 5,804 houses.

BOMBAY, 1*st December* 1881.

No.	Quantity.	Items.	Rate.	Per.	Amount.
			Rs. a. p.		Rs.
1	2,025,382 c. ft.	General excavation in earth moorum, boulders, &c., including filling in	2 12 0	100 c. ft.	55,698
2	4,03,514 s. ft.	Taking up, relaying and pointing with cement old paving in sweeper's passage and providing broken or missing stones...	12 0 0	100 s. ft.	48,422
3	258,135 rg. ft.	6″ Stoneware pipe laid complete	0 9 1	Ft. rq.	1,46,545
4	185,968 „	2½″ Do. do.	0 5 7	„	64,895
5	3,906 Nos.	Unglazed earthenware disc plugs from 7½″ to 5½″ diameter by ¾″ thick, including mortar fillet ...	20 0 0	100	781
6	357 „	6″ × 6″ Stoneware single junctions laid complete..	1 10 7	Each	594
7	17,268 „	6″ × 4″ Do. do. do. ...	1 10 7	„	28,690
8	745 „	6″ × 4″ × 4″ Do. double do. ...	2 9 8	„	1,940
9	3,421 „	6″ Stoneware bends laid complete...	1 9 11	„	5,541
10	25,292 „	4″ Do. do. do.	1 5 3	„	33,591
11	3,524 „	6″ Do. syphon traps and fixing	6 4 0	„	22,025
12	12,646 „	Stoneware gully traps 6″×6″ square in clear, fixed complete	3 12 0	„	47,423
13	26,986 „	3″ Cast iron square gratings fixed complete ...	0 6 9	„	11,385
14	2,500 „	2½″ Do. do. do. ...	1 6 6	„	3,516
15	2,500 „	2½″ Do. do. do. ...	0 15 0	„	2,344
16	20,367 „	2½″ Do. cistern heads do. ...	1 9 0	„	31,823
17	25,292 „	2½″ Do. straps for securing free spigot ends of pipes fixed complete	0 5 0	„	7,904
18	26,986 „	2½″ Do. through wall elbows fixed complete...	0 7 6	„	12,650
19	139,715 rg. ft.	Labour for removing and refixing old nani pipe...	0 2 0	Ft. rg.	17,464
20	13,695 Nos.	Do. removing and refixing old nani head...	0 0 6	Each	428
21	9,813 „	Do. do. T. W. elbows	0 0 6	„	307
		Total ...	.....		5,43,966

MUNICIPALITY—CITY OF BOMBAY.

Estimate No. *of* 1881.

Framed for the Executive Engineer, Municipality, of the probable cost of making Privy connections with Sewers in the first portion of the drainage scheme.

BOMBAY, 1*st December* 1881.

No.	Quantities.		Items.	Rate. Rs.	a.	p.	Per	Amount. Rs.
1	61,247	rg. ft.	4″ Cast-iron pipe fixed complete	0	9	4	Ft. rg.	35,727
2	7,120	Nos.	4″ Stoneware bends laid complete	1	5	3	Each.	9,456
3	7,361	,,	Stoneware gully traps 6″×6″ square in clear fixed complete	3	12	0	,,	27,604
4	3,655	,,	4″ Cast-iron junction pieces fixed complete ...	2	3	0	,,	7,995
5	3,655	,,	4″ Cast-iron angle pieces fixed complete	1	14	0	,,	6,853
6	1,850	,,	4″ Cast-iron ventilating heads fixed complete ...	2	15	6	,,	5,492
7	10,713	,,	Privy pans fixed complete	8	0	0	,,	85,704
8	10,713	,,	4″ Cistern heads fixed complete	2	3	0	,,	23,435
9	8,871	,,	4″ Straps for securing free spigot ends of pipe fixed complete	0	9	6	,,	5,267
10	7,361	,,	6″ Cast-iron square grating fixed complete ...	1	2	0	,,	8,281
			Total Rs....	.....				2,15,814

S A 17

Proposed by Colonel Hancock, seconded by Brigade-Surgeon Pinkerton—

"That the Municipal Commissioner's memorandum No. 10967 of this day's date, submitting estimates of the cost of making house connections for the first section of the new drainage works, be forwarded to the Corporation with the expression of the opinion of the Town Council, (1) that the house connections should be put in hand without delay ; (2) that the Municipality should undertake the work ;. (3) that provision should be made for the necessary expenditure ; and (4) that the question whether the cost is ultimately to be defrayed by the Municipality, in whole or in part, or to be recovered from house-owners, be referred to a Special Committee of the Corporation in consultation with the Commissioner, for report. The question of provision of privy fittings to be left to be dealt with separately after the result of experiments now about to be undertaken has been reported."

Carried. (Mr. Raghunath Narayan Khote only dissenting.)

Resolution of the Corporation No. 9021, *dated 8th December* 1881.

No. 9021. Mr. Navroji Furdoonjee's amendment as thus modified read as follows:—

1. "That the Corporation having deemed it unadvisable to undertake the construction of the whole scheme for the drainage and sewerage of the City of Bombay, and that as, with a view to exercise due caution in the trial of such an experiment, it was resolved, in August 1878, to borrow a loan of Rs. 17 lakhs for constructing the first section of the scheme, this meeting cannot sanction the proposal to borrow a fresh loan of Rs. 33 lakhs for undertaking the construction of the remaining sections of the scheme until all the works of the first section are completed, and until it is found, after a fair and sufficient trial, that these works are successful, and that they fully realise the objects for which they were designed.

2. "That a loan of Rs. 6 lakhs having already been borrowed for surface drainage works, which have not yet been commenced, this meeting considers it unadvisable at present to borrow a fresh loan of Rs. 9 lakhs for that purpose.

3. "That the Corporation authorises the Municipal Commissioner to ask Government whether they are willing to grant a loan not exceeding Rs. 14,91,214, or to allow the Corporation to borrow such a loan in the open market for the following works :—

A. TULSI WORKS.

	Rs.	
Malabar-Hill Reservoir	4,00,000	
Tulsi purchase and other works	78,000	
		4,78,000

B. DRAINAGE.

1.	*First Drainage Section*—		
	House-connections without privy fittings ...	6,25,561	
	Automatic flushers at heads of gullies ...	6,100	
	Provision for shafts-ventilators throughout (say)	50,000	
	Add—		
	Closing storm-water openings in Frere Road sewer and providing shafts-ventilators (say)	25,000	
2.	*Outfall*—		
	Two new pumping engines	88,000	
3.	*Kammatteepura Drainage*—		
	House-connection already provided out of current revenue, but adjusted as sanctioned by resolution of the Corporation No. 8402, dated 27th October 1881 ...	65,892	
4.	*Queen's Road intercepting Sewer*—		
	Rs. 1,92,000 (*minus* Government contribution of Rs. 50,000)	1,42,000	
	Survey for pipe-sewers	5,600	
	Survey on house-connections	5,061	
			10,13,214
	Total Rs. ...		14,91,214

Provided it be understood that no privy fittings are to be made until the result of the experiment already sanctioned in Kammatteepura has been fairly tried and submitted to the Corporation for sanction, and provided that detailed plans and estimates of all the said works, except Malabar Hill Reservoir, the Tulsi Works, and the Queen's Road intercepting sewer are submitted to the Corporation for final sanction before any expenditure is incurred thereon."

"On a division the votes were *recorded* as under :—

Amendment moved by Mr. Navrozjee Furdoonjee 23 *for* and 16 *against*.

The amendment was then put to a substantive proposition and *carried* by majority.

Resolution of the Corporation No. 9131, *dated 21st December 1881.*

Resolved: "That with reference to the Town Council's Resolution No. 8994 of 1881, and the Corporation's Resolution No. 9021 of 1881—

1. "That the Corporation are of opinion that the Municipality should undertake the work of making house connection on the first section of the new main drainge works.

2. "That the cost of making the said house connections be defrayed by the Municipality."

Extract from the Proceedings of the Corporation, dated 23rd January 1882.

(Answers by the Municipal Commissioner to questions asked by Mr. Nowrozji Furdonji.)

QUESTIONS.	ANSWERS.
4. If any of the house connections, drains, or sewers are blocked up or out of order, owing to failure of water supply, breakage of water pipes, or in consequence of refuse or solid matter getting into them, what means and appliances are proposed to be provided for putting them right immediately and preventing evil consequences?	4. As regards the main sewers they cannot be blocked. Should the pipe sewers or house connections become blocked (which is an unlikely contingency), they can be cleaned by Dickson's patent cleansing tools, which have already been ordered from England under the sanction of the Town Council. If the flushing of the pipe sewers is periodically effected even by means of sewage alone, it is almost impossible for them to become stopped up; but the obstacle could be at once removed, either by special flushing or by the use of the cleansing tools.
5. What is the cause of the delay that has occurred in finishing the works, and when the first section is expected to be completed and in working order?	5. The main sewer and outfall sewer are practically completed. The engine house and the erection of the pumping engines are in hand, and the pipe sewers will be completed by the end of March. The surveys for the house connections are now complete, and the estimates are being framed. It is impossible to state how long they will take to carry it out, as it will entirely depend upon the ability and energy of the contractor; but if the house connections are immediately sanctioned, a considerable portion of the first section of the sewerage system should be in working order by 1st of June 1882. As regards the pipe sewers, the contractors state, as their reason for non-completion within contract time, the fact of their not being allowed to open more streets than we were able to allow them to do in the interest of public convenience.

APPENDICES.

Proceedings of the Town Council No. 1398, *dated 7th July* 1882.

Considered the following:—

No. 1252 OF 1882.

BOMBAY, *9th March* 1882.

To E. C. K. OLLIVANT, Esq., C. S.,
Municipal Commissioner.

SIR,—In reply to your No. 1785 of 1882, I have the honour to submit the following information regarding the drainage of Cammatteepura and the privy experiments proposed to be made there.

2. I should first point out that the sewerage scheme which is now being carried out cannot be referred to as the one sanctioned by the Corporation on the 31st October 1879, as that project did not provide for house connections, privy arrangements, or for the segregation of storm waters from the sewage.

3. By the Town Council's resolution of 15th June 1880, it was resolved that the scheme sanctioned on 31st October 1879 should be revised so as to admit of these additions and alterations.

4. During the monsoon of 1880 the survey of Cammatteepura was carried on by a permanent staff of the Drainage Department, but on the 24th August 1880 the Town Council sanctioned a special staff for the purpose.

5. The complete scheme, including the additions required by the Town Council, was submitted to the Commissioner on the 20th June 1881, received the approval of the Town Council on the 21st July 1881, and the sanction of the Corporation on the 29th July 1881.

6. Thus it will be seen that the date of sanction to the drainage scheme for Camatteepura was 29th July 1881 and not 31st October 1879.

7. I received the Commissioner's orders to prepare the conditions of contract, plans, &c., on the 2nd August 1881, and sent the former to the Superintendent of Stationery to be printed on 30th September 1881.

8. The first proof was sent to me on 4th November 1881 and the fair copy on the 14th of that month.

9. On the 29th November the Commissioner sanctioned advertising for tenders, two of which were received on the 19th December 1881.

10. Tabulated statements of these tenders were forwarded to the Commissioner on the 21st December 1881, on which date the Town Council decided not to accept either tender.

11. On the 6th January the Town Council sanctioned the prosecution of the work departmentally, and on the 11th of that month I applied for a special staff to carry out the work.

12. On the 23rd January Nagoo Sayaji submitted a tender, which was accepted by the Town Council on the 27th January 1882.

13. The conditions of contract were signed on the 22nd February 1882. Since then the contractor has progressed favourably with the work, having excavated to a depth of about 9 feet and partially shored up a length of 420 feet of the trench for the ovoid sewer in the Grant Road and a similar length for the sewer, Omerkhary Sewer Road. In Camatteepura 3rd street, he has excavated the trench for the pipe sewer and laid in some of the pipes. In Cammatteepura 4th, 5th, 6th, 7th, 8th and 9th streets, he has also excavated trenches for pipe sewers, and in several of the streets mentioned he has taken up the old pipes.

14. The contractor has also commenced to cast the concrete invert blocks, and is making other arrangements to expedite and carry on the work in a satisfactory manner.

15. As regards the 2nd para. of the Hon'ble Rao Saheb's resolution, I have to point out that as soon as it was determined to have an experiment in Cammatteepura to test the proposed privy arrangements, with your sanction I wrote to Messrs. Doulton & Co. of London and Messrs. Burn & Co. of Calcutta for the privy pans, and have up to date only received two from the latter firm. The former in their letter (already forwarded to you) state their intention to give the matter their earliest attention, but up to date have sent out nothing.

16. I have, however, had some pans made at the Municipal Workshops of cast iron, and am at present having them fitted up for the employés of this office. These will be ready in a few days, and if found to work efficiently, similar ones can be made and adopted for the experiment at Cammatteepura without loss of time and at a great saving in outlay.—I have, &c.,

RIENZI WALTON,

Executive Engineer.

Municipality.

Recorded.

APPENDICES.

APPENDIX D.—VOL. VI.

To THE CHAIRMAN,
Municipal Corporation of Bombay.

SIR,—The Committee appointed on the 21st December last, as per margin, to inquire into the question of house connections on the first section of new main drainage, and to report thereon in consultation with the Municipal Commissioner, have the honour to report as follows :—

Resolved: "That with reference to the Town Council's Resolution No. 8994 of 1881 and the Corporation's Resolution No. 9021 of 1881,

"1. That the Corporation are of opinion that the Municipality should undertake the work of making house connections on the first section of the new main drainage works.

"2. That the question whether the cost thereof is ultimately to be defrayed by the Municipality, in whole or in part, or to be recovered from house-owners, be referred to a Special Committee of the Corporation in consultation with the Commissioner for report, the question of provision of privy fittings to be left to be dealt with separately after the result of experiments now about to be undertaken has been reported.

"3. That the following gentlemen form the Committee :—

"Colonel Hancock, Brigade-Surgeon Pinkerton, the Hon'ble Rao Saheb Vishwanath Narayan Mandlik, Mr. Navrojee Fardunjee, Mr. Raghunath Narayen Khote, Dr. Blaney, Brigade-Surgeon Cook, Mr. Mahomed Alli Rogay, Mr. Mathew and Mr. Gostling."*

* Capt. Morland, Surgeon-Major Blanc and Lt.-Col. Merewether have been subsequently appointed, *vice* Mr. Mathew, Brigade-Surgeon Cook and Colonel Hancock, left Bombay. Brigade-Surgeon Pinkerton has left Bombay for Scinde.

From a memorandum prepared by Mr. Rienzi Walton, Executive Engineer, under date the 10th instant, the Committee find that the number of houses to be connected and the estimated cost of making the connections in the above districts in addition to Cammateepura is as under :—

First portion of the Drainage Scheme.

Number of houses to be drained...		5,804
Cost of Nani connections...	Rs.	5,43,966
Do. Privy do.	,,	2,15,814
Total cost of house connections ...	Rs.	7,59,780
Cost of Nani connections for each house		93·72
Do. Privy do. do.		37·18
Total cost of connections for each house ...		130·90

Cammateepura District.

Number of houses to be drained		1,429
Cost of Nani connections...	Rs.	31,403
Do. Privy do.	,,	35,989
Total cost of house connections	Rs.	67,392
Cost of Nani connections for each house		21·97
Do. Privy do. do.		25·19
Total cost of connections for each house ...		47·16

Three proposals were considered by the Committee :—(1) that the Corporation shall pay for the entire cost of the connections, both inside and outside the houses, and undertake to keep all fittings outside the four walls of the house in good order thereafter; (2) that this provision for the payment by the Municipality shall only apply to the existing houses; (3) that the Corporation shall supply, lay and keep in order *at thier own expense*, all pipes and fittings that are under-ground, and also one ventilating pipe to each house above-ground. That the Municipality shall supply at the expense of the house proprietor all pipes and fittings that are above-ground, that they shall, in the first place, fix this above-ground pipes and fittings at Municipal expense, and such pipes and fittings after being once laid shall be kept in order by the house proprietor, or in his default by the Municipality at his expense. That in regard to the first cost of such above-ground pipes and fittings, it shall be charged to the house proprietor at printed schedule rates, which shall be calculated at cost price.

Having regard to the special importance of the whole of the work in question being carried out by a responsible agency, and on a uniform system, the Committee are of opinion that the necessary fittings for all the houses on this section, including Cammateepura, should be supplied by the Municipality at its own cost, and placed in position under the orders of the Executive Engineer. The Committee do not think it would be advisable to call on the owners to pay for the cost of connections between the external pipes and the nanis and privies inside the houses. The total charge for this will probably only amount to about Rs. 24,000, but the recovery thereof would necessitate the issue of some thousands of bills, and it does not seem worth while to separate this comparatively small charge from the cost of the work generally.

The Committee therefore beg to recommend—

(1) That the Municipality should pay for the entire cost of the house connection, both inside and outside the house, and undertake to keep all fittings outside the four walls of the house in good order thereafter.

(2) That this provision for the payment of the cost by the Municipality shall not apply to houses to be built hereafter, but that so far as maintenance is concerned that shall be undertaken by the Corporation as in the case of existing houses.

G. MEREWETHER.
HENRY MORLAND.
RAGHUNATH N. KHOTE.
20th October 1882. H. J. BLANC.
VISHVANATH N. MANDLIK.
26th October 1882. M. A. ROGAY.

I dissent from the opinion of the majority of the Committee. We are introducing a bad precedent in proposing not only to supply house pipes to house owners throughout the town at Municipal expense, but also to maintain these pipes and make good any breakages.

I am prepared to agree that it should be the duty of the Health Department regularly to inspect these pipes at stated intervals and clean them, and thereby keep them in working order at the expense of the Municipality. But that is as far as we, as guardians of the public purse, ought to go. The house pipes ought to continue to be supplied by house owners, as they have hitherto up to this time been, and such breakages as from time to time occur should be made good by them or at their expense.

From the estimate included in the proceedings of the Town Council, dated 28th November 1881, I find that in the 5,804 houses already surveyed, there are 139,715 running feet of cast-iron nani piping and 13,695 pipe heads already fixed to the walls, being at the rate of 24 feet of piping and between two and three pipe heads per house, which the Engineering Department have surveyed and ascertained to be in good order; for they only provide in the said estimate two annas per running foot of each pipe and six pies for each head respectively for re-fixing same in accordance with the new scheme. This shows that existing houses are already fairly well supplied with suitable piping, to which syphons only have to be added to keep the sewer smell from entering the houses.

In the above estimate 185,968 running feet of new 2½ inch stoneware piping is provided for, and 20,367 heads for ditto, being at the rate of 32 feet of piping and three to four heads per house. I understand that this piping is for ventilating the sewers and for completing house connections to existing nanis or bath places. The total number of bath places in this section is therefore 34,062, being an average of nearly 6 per house.

It is unusual to fix heavy stoneware piping against the wall of a house, and I am not sure that it will work well in practice, on account of the multiplicity of joints, and the difficulty of fixing such a heavy material against a thin wall. The experiment should first be tried cautiously and tentatively. If found to succeed, it will cost about the same as cast-iron piping of corresponding size; but it would not be advisable at first to order out from Europe a large quantity of such piping which might hereafter prove to be not suitable, and be thrown on the hands of the Municipality as a dead loss. But so far as the 2½ inch piping is to be used for ventilating pipes by being fixed upright to the walls of houses, I am decidedly of opinion that this size is altogether too small, and, if adopted, will end in failure; nothing less than 4 inch diameter should be allowed for this purpose, and I think that 6 inch diameter, the size of the drain pipe, would be better. There should be no obstruction to the rapid removal of sewer gas, and it is better to err on the safe side and have the ventilating pipes too large rather than too small. I do not think 6 inch diameter would be too large.

I am still of the opinion, I urged on the Committee, that the Municipality should pay the cost of supplying and laying

the new drains to houses, and of keeping them in repair and cleaning them; and that this course should also be carried out in respect of the ventilating pipes; also that the house pipes should be fixed and cleaned at Municipal expense, but that they should be supplied at the expense of the house owner and kept in repair also at his expense. This is, as far as we can be reasonably expected to go. House owners have been obliged up to this time to pay for their house piping, and they should continue to do so. No one is thankful for what is given for nothing, but each man will try to keep in good order what he has had to pay for. These house pipes are in such an exposed position that they are extremely liable to breakage; hence personal interest is the best security for their preservation.

I have endeavoured in the below figures (taken from above estimate) to apportion the drain pipes, ventilating pipes, and house pipes under separate heads, in order to ascertain what the effect of this policy (if approved by the Corporation) would be :—

		Under ground piping.	Ventilating and house piping.
1.	General excavation	55,698	
2.	Relaying sweeper's gullies	48,422	
3.	6″ stoneware drain pipe	146,545	
4.	2½″ ventilating and house piping ...	.....	64,895
5.	Disc plugs	781	
6.	Junctions	594	
7.	Do.	28,690	
8.	Do.	1,940	
9.	Bends	5,541	
10.	Do.	33,591	
11.	Syphon traps...	22,025	
12.	Gully traps	47,423	
13.	3″ gratings	.....	11,385
14.	2½″ do.	.....	3,516
15.	2½″ do.	.....	2,314
16.	2½″ cistern heads	.....	31,823
17.	Traps	.....	7,904
18.	Do.	.....	12,650
19.	Labour of removing and refixing old nani piping...	.....	17,464
20.	Do. do. old nani head.	.....	428
21.	Do. do. elbows ...	.....	307
	Total cost of drain piping	3,91,250	
	Do. of ventilating and house piping ...		1,52,716
	Add cost of nani pipes if they were new...		52,380
	Do. heads		20,971
	Do. elbows		3,988
			2,80,055

Deduct one-fourth of the total cost of house and ventilating pipes as the estimated cost of the ventilating pipes alone, and *add* same to the cost of drain pipes. ...		57,514	57,514
		4,48,764	1,72,514
Deduct cost of refixing old nani pipes and *add* same to the cost of drain pipes...	17,460		
Do. do. ...	428		
Do. do. ...	307		
		18,199	18,199
Total cost of drain pipes, ventilating pipes and of laying house pipes		4,66,963	
Total cost of house pipes, the fixing of same being done at Municipal expense...		.....	1,54,342
Add drain and ventilating pipes			4,66,963
Total cost of house connection scheme, if all the pipes were new			6,21,305
Thus upon my proposition the cost of house connections to each owner would be			1,54,342
			5,804
Equal to about Rs. 26-10-0 per house, while the corresponding cost to the Municipality would be			4,66,963
Equal to about Rs. 80-8-0 per house			5,840

As there are 30,000 houses in Bombay, of which 20,000 will have to be drained sooner or later, the cost of the house pipes alone in these latter will amount to more than five lakhs, while the drains and ventilating pipes will cost 16 lakhs, all in addition to the cost of the drainage proper of the streets.

It remains to be seen if the Corporation will go out of their way and make a present to the house owners of five lakhs for piping work, which they (the house owners) have always had up till now to provide for themselves.

D. GOSTLING.

BOMBAY, 23*rd October* 1882.

I agree generally with Mr. Gostling in the above dissent. I consider it unfair that the Municipality should, as recommended by the majority of the Committee, bear the whole of the enormous cost of the proposed house connections. Such a course will involve the Corporation in pecuniary difficulties which should be avoided.

NOWROJEE FURDOONJI.

24*th October* 1882.

BOMBAY MUNICIPALITY.

Extract from the Proceedings of the Corporation, dated 3rd November 1882.

No. 2268. Considered the report of the Committee appointed by the Corporation on the 21st December last, to inquire into the question of the payment of the cost of making house connections on the first section of the new main drainage works, including Kamathipura District.

The Chairman informed the meeting that a letter on this subject had just been received from the Hon'ble Rao Saheb Vishvanath Narayen Mandlik, which would be read by the Clerk.

The Clerk read the letter as under :—

HERMITAGE, *3rd November* 1882.

To H. W. BARROW, ESQ.,
Secretary to the Town Council,
and Clerk, Municipal Corporation.

SIR,—As I am unable to be present at to-day's Corporation meeting, oblige me by reading this (with the Chairman's permission) when the matter of house connections comes on. I have signed the Committee's report on the question of expense, as I stated to the Committee when the matter was discussed; but in regard to the actual making of these connections, I beg to remind my colleagues, that these cannot be made until the result of experiments sanctioned by the Corporation more than a year ago, is reported to, and discussed by, the Corporation. This is a vital matter upon which our lives depend; the Drainage Commissioner's report on this head rests on a pure mistaken assumption (see Preparatory Remarks, page 8) about the existence of a working privy system in Dukurwadi (in Dhobitalao), where no such drain has existed, and none exists at this very day.

The whole subject is thus open to the consideration and decision of my friends in the Corporation.

Yours faithfully,
V. N. MANDLIK.

Proposed by the Chairman, seconded by E. B. Carroll, Esq.—

"That the report of the Committee appointed by the Corporation on the 21st December last, on the subject of the cost of making house connections on the first section of the new main drainage works, including Kamathipura District, be approved and adopted. Provided that such cost be limited to the property of owners who pay the consolidated rate in full."

Amendment, moved by D. E. Gostling, Esq., seconded by Nowrojee Furdoonjee, Esq.—

"That the Corporation shall supply, lay and keep in order, at their own expense, all pipes and fittings that are underground, and also one ventilating pipe to each house above-ground.

"That the Municipality shall supply at the expense of the house proprietor all pipes and fittings that are above-ground.

"That they shall in the first place fix these above-ground pipes at Municipal expense; and such pipes, fittings, after being once laid, shall be kept in order by the house proprietor, or, in his default, by the Municipality at his expense.

"That, in regard to the first cost of such above-ground pipes and fittings, it shall be charged to the house proprietor at printed schedule rates, which shall be calculated at cost price.

"That the owners of bungalows which stand within their own compounds shall pay for the cost of drains and fittings.

"That the Health Department shall clean the drains and fittings at Municipal expense."

Amendment, moved by Surgeon-Major Blanc, seconded by Captain Morland—

"That the Municipality undertake to pay for the entire cost of the construction of house connections both inside and outside the house, and to maintain all fittings outside the four walls of the house in good order hereafter. Provided that this undertaking on the part of the Municipality shall not apply to house to be built hereafter, except so far as the maintenance is concerned, and that it shall not apply either as regards construction or maintenance to any property on which the consolidated rate is not charged in full (except in the case of charitable and religious institutions).

"That, in the case of any building standing in its own compound, the question of the payment of the cost of constructing and maintaining the connections be referred by the Commissioner to the Corporation as he may deem necessary."

A proposal to adjourn the meeting, made by Lieut.-Colonel Merewether, seconded by Jamshedji Pallanji Kapadia, Esq., was *lost*, the votes being 7 *for* and 15 *against*.

On a division, on the original proposition and the amendments thereon, votes were *recorded* as under :—

	For	*Against.*
Proposition moved by Surg.-Major Blanc...	22	4
Original motion ...	1	large majority ; *lost*
Amendment moved by D. E. Gostling, Esq.	4	23 ; *lost*

The amendment moved by Surgeon-Major Blanc was carried as a substantive proposition by 23 votes *against* 3.

Extract from the Proceedings of the Corporation, dated 31st August 1883.

Considered the following :—

No. 2273 OF 1883-84.

BOMBAY, *23rd July* 1883.

To SURGEON-MAJOR T. S. WEIR,
Acting Municipal Commissioner.

SIR,—With reference to your No. 3964, dated 12th July 1883, I have the honour to report as follows upon the several paras. of Dr. Blaney's letter of 9th July 1883 :—

1. The ovoid sewer from the junction of Falkland and Grant Roads to the south end of Bazar Street has been constructed, and the new trunk pipe sewers laid. All the manholes have been built. The three brick ovoid sewers, which run respectively to Khurshedji Suklaji street, Centre Street and Bazar Street, have not yet been connected with the new sewer, though every preparations for doing so has been made ; the actual connections have been deferred until the contractors complete the pointing of the arch of the new sewer, and the clearing away of mortar and cement droppings on the invert. 4·61 miles of 6 inch stoneware pipe, syphon pipes, junctions and bends have been laid, chiefly in the narrow dirty sweeper's passages. This work may roughly be described as finished, except as regards the sweeper's passages and at the sides of the Oomerkhady Sewer Road and south part of Kharshedji Suklaji Street between Oomerkhady Sewer Road and Grant Road. The sewage still runs upon the sweeper's passages because there are at present no down-take pipes to conduct it into the gully traps from which it would run into the stoneware pipes. There is therefore scarcely any appreciable improvement yet upon the old system. Seven privies and seventy-four nanies have, however, been fully connected and are working exceedingly well. From house owners who have seen what has been done, I am receiving applications for their own houses to be fitted up in a similar manner.

2. The cost of the work already carried out by the contractors (*after deducting the value of materials reclaimed*) is Rs. 60,761.

The fitting up of the privies and nanies, which has not been done under contract, has not yet been fully measured up and billed.

3. The unfinished work referred to in the reply to para. 1 has yet to be done, and all the nanies, except seventy-four, have to be fitted up with down-take pipes and other cast-iron fittings to conduct the sewage to the stoneware pipes.

4. The remaining work to be done under the contract which has been let will cost Rs. 18,077. The sum which has been reserved for nani connections, ventilating shafts and flushes is Rs. 33,917.

5. I beg to submit that it scarcely comes within my province to reply this. You are aware that sanction has recently been given to call for tenders for the supply of castings for nani connections and the conditons of contract have, at your request, been sent to the Municipal Solicitors for their opinion. Monthly progress reports have been submitted to you, except as regards May and June, reports for which months have been delayed, because of the rains having retarded the completion of some unfinished work which it was desirable to include.—I have, &c.,

RIENZI WALTON, M.I.C.E.,
Executive Engineer.

No. 5295 of 1883-84.

14th August 1883.

Forwarded to the Controller for favour of report on the financial point of the question before Friday next.

DOUGLAS BENNETT,
Assistant to Commissioner.

No. 1172 of 1883-84.

BOMBAY, *16th August* 1883.

To THE MUNICIPAL COMMISSIONER.

The sums already paid to the contractors for the Kamatipura works for work done aggregate Rs. 65,125-10-6. The Executive Engineer has in his hand certificates for work done from April to June, amounting to Rs. 12,392-13-10. He has thus taken the cost of work already carried out at Rs. 77,518-8-4. Deducting therefrom the value of materials reclaimed, *viz.*, Rs. 16,757-0-7, he has given the net cost of work at Rs. 60,761-7-9. But I do not think credit for the value of the materials can be taken until we actually realize their sale proceeds.

Rs. 92,043 for the Kamatipura drainage, including house connections, have been sanctioned to be paid out of the Drainage Loan allotment of 17 lakhs. Rs. 58,392 for Kamatipura house connections, *plus* Rs. 7,500 for establishment charges, &c., or, in all, Rs. 65,892 have been included in the loan of 15 lakhs sanctioned by the Corporation in December 1881.

SORABJI NAVAROJI COOPER,
Controller of Municipal Accounts.

It was agreed that the above papers be circulated.

Extracts from the Proceedings of the Corporation, dated 1st October 1883.

No. 1380. Considered again letter No. 12273, dated 23rd July last, from the Executive Engineer, regarding the Kamatipura Drainage Works, together with the Controller's memorandum No. 1172, dated 16th August last. (See minutes of the meeting held on the 31st August last.)

Proposed by Thomas Blaney, Esq., seconded by Shivaji Dhurmaji, Esq.—

"That the reports from the Executive Engineer or the Controller of the Municipal Accounts regarding the Kamatipura Drainage Works be *recorded*, and that the incomplete portions of these sewerage works (excluding privy connections) be at once proceeded with, and completed as early as practicable.

"That the cost of completing the house connections (excluding privy connections), Rs. 22,403-11-2, be paid as an advance from surplus cash balance, to be adjusted from the 15 lakhs loan, as soon as the same is drawn upon by the Municipality."

Carried.

Extract from the Proceedings of the Corporation, dated 1st March 1884.

"That, as recommended by the Town Council in their resolution No. 2248, dated 27th February last, sanction be given to the transfer of Rs. 15,070 from savings on the 17 lakhs loan drainage allotment, to provide for the additional cost of house connections in Kamatipura.

"That the Commissioner be requested to report to the Corporation as soon as the work in question is actually completed."

Carried.

Extract from the Proceedings of the Corporation, dated 27th June 1884.

Amendment, proposed by Raghunath Narayen Khote, Esq., seconded by Colonel Merewether—

"That the resolution of the Town Council, No. 2249 of 1884, and the letter from the Municipal Commissioner, No. 12333, dated 20th February last, on the subject of the increased cost of constructing house connections in the first drainage system, be referred to the following Committee to

consider and report as to what, bearing, if any, the circumstance of that increased cost, should be regarded as having on the resolution of the Corporation according to which the cost of house connections is to be borne by the Municipality :—

Mr. Dosabhoy Framji.
Dr. Blaney.
Col. Merewether.
Mr. Gostling.
Mr. Nowrojee Furdoonjee.
Dr. Blanc.
The Hon'ble Rao Saheb Vishwanath N. Mandlik.

The amendment was carried as a substantive proposition by 17 votes *against* 13.

At the meeting of the Town Council held on the 1st July 1885, it was agreed that the Commissioner be asked to report whether any progress had been made in the matter of house connections.

At the meeting of the Town Council, held on 8th July 1885, the Commissioner reported that the tenders for house connections sent in were considered too high.

Proceedings of the Corporation, No. 853, *dated 5th September* 1885.-

Considered the following :—

No. 721 OF 1885-86.

BOMBAY, 11*th August* 1885.

To

PHEROZESHAH M. MEHTA, ESQ.,
Chairman, Municipal Corporation.

SIR,—Referring to the resolution of the Corporation, passed on the 27th June 1884, as per margin, I have the honour to inform you that one member, Dr. Blanc, resigned membership of the Corporation on 4th March last; that a second member, Mr. Gostling, left Bombay for Europe on 14th July last; that a third member, Mr. Dosabhai Framji, C.S.I., is too ill to act on the Committee; and that the remaining 4 members, differing in opinion, have recorded the following minutes.—I have, &c.,

"That the resolution of the Town Council, No. 2249 of 1884, and letter from the Municipal Commissioner, No. 12338, dated 20th February last, on the subject of the increased cost of constructing house connections in the first drainage system, be referred to the following Committee to consider and report as to what, bearing, if any, the circumstances of the increased cost should be regarded as having on the resolution of the Corporation, according to which the cost of house connections is to be borne by the Municipality :—

MR. DOSABHAI FRAMJI.
DR. BLANEY.
COL. MEREWETHER.
MR. GOSTLING.
MR. NOWROJI FURDUNJI.
DR. BLANC.
THE HON'BLE RAO SAHEB VISHVANATH N. MANDLIK.

H. WYNFORD BARROW,
Clerk, Municipal Corporation,
and Secretary, Town Council.

The Committee beg to refer to the statement made to the Corporation by the Municipal Commissioner on 3rd April 1884, namely, "that the total excess over the sanctioned grant would be Rs. 1,21,111, instead of Rs. 5,87,368, as previously reported," and to add that the Committee are now informed there is good reason for believing that the cost of the supply of ironware, as also that of fitting the pipes, &c., would now be still less than as referred to by the Commissioner on the above date.

The Committee are, therefore, of opinion that the excess in the cost of making the connections would, in all probability, not be so great as to affect the principles embodied in the Report of the Committee, dated 26th October 1882, and adopted by the Corporation on the 3rd November following.

THOMAS BLANEY.
G. MEREWETHER.

I cannot agree with my colleagues. The present financial condition of the Municipality will not permit us to undertake the heavy cost of making the house connections at the expense of the Corporation. It will not be possible to negotiate a large loan for this purpose except at a ruinous cost.

There is no other alternative than that of abandoning the scheme, the advantages being extremely doubtful.

NOWROJEE FURDOONJEE.

25*th July* 1885.

I have now looked over the estimates and they have been explained to me by Mr. Walton.

The amounts are as under :—

1.	For erecting automatic flushers at heads of certain gullies in the first portion of the drainage scheme...	Rs.	6,095
2.	Work in cast-iron and zinc ventilating shafts for the same ...	„	49,912
3.	For branch pipe sewers, cast-iron down-pipes and fittings for main connections in the same... ...	„	6,25,561
	The total of these make	Rs.	6,81,568

It seems now that on this there is an increase of Rs.1,21,111 (see Proceedings of the Corporation, 3rd April 1884). Having given the subject my best consideration, and looking to the gravities of the issues involved in this case, looking also to some of the new superior buildings in the Fort which their residents have had to leave in consequence of their insanitary condition, and the emanations from the new stately chimneys along the Queen's Road, my humble opinion is, that, for the present, we ought to sanction no house connections, much less house connections at an

increased cost. I once observed that the Municipal Commissioner proposed stopping with gully connections, and this might be done if such a modified scheme be sanctioned by the Corporation. Valuable scientific information is pouring upon from all sides; our economical social conditions are different, and it seems we are ignoring these entirely when we seek to drive the Halalkhors off the city. I agree, therefore, with Mr. Nowrojee and would not sanction the expenditure of an additional pie on this work.

7th August 1885. V. N. MANDLIK.

The Clerk and Secretary read the following :—

THE CHAIRMAN, Municipal Corporation.

SIR,—My duty as Coroner of the City will prevent me attending the special general meeting of the Corporation this afternoon. I regret this very much as it was my intention to propose an adjournment of the report of the Sub-Committee on house connections in the first drainage section until the Tansa water scheme is disposed of. Both these subjects are of considerable financial importance, and it seems to me most desirable that the most expensive scheme should be first considered, as by doing so the Corporation may be able to avoid a future financial difficulty.—I have, &c.,

THOMAS BLANEY.

BYCULLA, *5th September* 1885.

Proposed by Colonel Merewether, seconded by Captain Morland—

"That letter No. 721, dated 11th August 1885, from the Clerk and Secretary, to the Chairman, submitting minutes by members of the Committee appointed by the Corporation to consider the question of the increased cost of constructing house connections in the first drainage section be *recorded*.

No. 353.

"That in the opinion of the Corporation, the additional cost of making the connections would, in all probability, be not so great as to affect the principles embodied in the Report of the Committee dated 26th October 1882 and adopted by the Corporation on the 3rd November following."

Resolution of the Town Council, No. 1978, *of* 10*th March* 1886.

The Commissioner informed the Council of the results of a second invitation of tenders for the construction of house connections in the first drainage section, and stated

that, as these results were not better than those previously obtained, and as the rates were, in the opinion of the Executive Engineer, unnecessarily high, he proposed to proceed departmentally with one sub-section and for reasons explained, he had selected the Khetwadi sub-section (according to the boundaries defined as per margin). Whether the work were proceeded with departmentally or by contract, it would be necessary to indent on Messrs. Doulton & Co. for the stoneware pipes to be laid from the houses to the street sewer; and, as regards the supply of iron work for the house down-take pipes, he thought he could not do better than close with Messrs. George Smith & Co., of Glasgow, whose tender (the lowest received) had already been reported. There was no object in getting the iron work piecemeal, for a higher price would then have to be paid first, and it must be obtained from England, and whether the Municipality were to pay for all the house connections or not, they certainly ought to be in a position to supply the fittings which were necessary to carry out their requirements to persons who could not obtain them locally. He hoped that the result of the departmental work, of which he would lay before them a detailed estimate at their next meeting, would be to show that rates considerably lower than those now tendered would be remunerative to contractors, and meanwhile he asked for the formal sanction of the Council to his entering into a contract with Messrs. George Smith & Co. for the whole of the iron work and for the usual provision of 15 per cent. for contingencies.

Portion of Grant Road; part of Falkland Road; 1st Carpenter Street; portion of Kavasji Patel Tank Road; portion of Girgam Back Road; and part of Charni Road.

Resolved: "That sanction be given to the purchase of the iron work required for the first section of the drainage system, from Messrs. George Smith & Co.

No. 1978.

"That the Municipal Commissioner be authorised to carry out the construction of house connections in the Khetwadi District, bounded by portion of Grant Road, part of Falkland Road, 1st Carpenter Street, portion of Kavasji Patel Tank Road, portion of Girgam Back Road, Khetwadi Main Road, and part of Churni Road, departmentally at a cost to be reported at the next meeting."

Resolution of the Town Council, No. 2074 *of* 24*th March* 1886.

No. 2074. The Municipal Commissioner handed in the following statement of the cost of the construction of house connections in Khetwadi District, as asked for at the meeting of the Town Council held on the 10th instant :—

KHETWADI HOUSE CONNECTIONS.

	Rs.
Supply of Materials.—Iron work under Messrs. George Smith & Co.'s contract already sanctioned for the whole of the first drainage section ; portion of the sub-section...	11,329
Stoneware, under Messrs. Doulton & Co.'s contract, already sanctioned for this sub-section	24,732
Cement for which tenders will be invited	1,800
Rs.	37,861
Cost of construction	19,899
Add—Contingencies at 5 per cent	2,897
Establishment at 10 per cent...	5,776
Total Rs...	66,433

Recorded.

Resolution of the Corporation No. 1857, *dated* 7*th March* 1887.

In accordance with notice of motion, it was proposed by Thomas Blaney, Esq.—

"That the Municipal Commissioner be requested to submit to the Corporation plans and estimates of house connections for all houses for which new sewers and pipe drains have been laid down in Agripada, Byculla and Parel."

The motion was seconded by Captain Selby.

On a division, there were 28 votes *for* and 4 *against* the motion which was *carried.*

Resolution of the Town Council, No. 167, *dated* 7*th April* 1887.

Read the following :—

No. 136 D. OF 1887-88.

BOMBAY, 6*th April* 1887.

To E. C. K. OLLIVANT, Esq., C. S.,
Municipal Commissioner.

SIR,—With reference to your memo. No. 16004, dated 8th March 1887, I have the honor to submit the following estimate of

The cost of the new establishment which would be required for preparing detailed plans and estimates for house connections for all houses in the district recently sewered under the Agripada pipe sewer contract with Messrs. Fakir Mahomed Babanbhai & Co., with the addition of houses in Ripon Road, DeLisle Road, and Parel Road :—

				Rs.
4 Surveyors at Rs.	80	per mensem	... ...	320
6 „	„ 60	„	... ...	360
4 „	„ 45	„	... ...	180
28 Lascars	„ 10	„	... ...	280
				1,140
		Months	...	3
				3,420
Instruments, &c.	... ...	...	...	400
		Total Rs.	...	3,820

2. Many portions of the above district having been recently built on an entirely new survey, will in great part be required. The new buildings are, of course, not shown on the existing plans.

3. As you have expressed a wish to have immediately a rough estimate of the cost of these house connections, I beg to state that in my opinion the cost will approach five lakhs of rupees.

It must be understood that, in the absence of plans and quantities, this estimate cannot be more than approximate, and that I cannot feel myself bound thereby.—I have, &c.,

RIENZI WALTON,
Executive Engineer.

No. 762 of 1886-87.

Bombay, 18*th April* 1887.

To the CLERK,
Municipal Corporation.

Sir,—With reference to the resolution of the Corporation, No. 1857, dated 7th ultimo, I have the honor to forward copy of a letter from the Executive Engineer, from which it will be seen that, in order to enable me to furnish the Corporation with plans and estimates asked for by them, an expenditure of Rs. 3,820 will be necessary.

2. I have forwarded a copy of this letter with the accompaniment to the Town Council in order that they may be in a position to make the necessary recommendation for the sanction of this sum. —I have, &c.,

E. C. K. OLLIVANT,
Municipal Commissioner.

OF 1887-88.

BOMBAY, *8th April* 1887.

...animent, forwarded with the Muni-
...ients to the Town Council for the

E. C. K. OLLIVANT,
Municipal Commissioner.

...nath Narayan Khote, Esq., seconded
...ed Sayani, Esq.—

...ation be recommended to sanction the
...Rs. 3,820, from surplus cash balance,
...e cost of the following establishment
...d estimates, asked for by the Cor-
...solution No. 1857, dated 7th March
...se connections for all houses in Agripada
...tly sewered :—

					Rs.
...rveyors at Rs. 80 per mensem			...	...	320
„	„	60 „	...	...	360
4 „	„	45 „	...	...	180
28 Lascars	„	10 „	...	...	280
					1,140
				Months...	3
					3,420
				Instruments, &c....	400
				Total Rs...	3,820

Carried.

Extract from the Proceedings of the Town Council, dated 11th May 1887.

It was agreed that the consideration of memorandum No. 1941, dated 9th instant, from the Acting Municipal Commissioner, forwarding certain correspondence regarding house connections to mills and other such places, for an expression of the Town Council's and Corporation's opinions, as to whether the expense of house connections to mills and trading concerns in the first drainage section should be borne by the Municipality, as well as in the case of private house owners, be postponed till next meeting, and that in the meantime the papers be circulated to the members of the Council.

Resolution of the Corpora
June 18

Considered again the following
26th May 1887 by Thomas Blaney,
"That the water closet system be
No. 479. mathipura, pending the
water supply."

This motion was now seconded
Esq.

Amendment, moved by Dosabhai F

"That, as recommended by the T
resolution No. 165, dated 27th April
Commissioner be authorised to proceed w
closet system in Kamathipura, as far as the
premises are concerned."

Not seconded.

Amendment, moved by Captain G. W. Martin, s
by Sir Frank H. Souter—

"That the Town Council be requested to provide t
Corporation with detailed information, showing clea
whether they are able to guarantee a constant and su
cient water supply for the flushing of the closets on t
ground floor in Kamathipura above that necessary for t
requirements of the city for other purposes."

Amendment, moved by Bomonjee Pestonjee Master, Esq.
seconded by Rastamji Nassarwanji Khory, Esq.—

"That a Committee of the following gentlemen, *viz.*, Dr.
Blaney, Khan Bahadur Muncherjee C. Murzban, Captain
G. W. Martin, Mr. Cowasjee Hormusjee, Mr. Javerilal
U. Yajnik, Mr. K. M. Shroff, Mr. J. R. Duxbury,
and Mr. R. M. Khote, be appointed to enquire and inves-
tigate the matter, and to lay the result of their inquiry
before the Corporation at an early date."

Mr. Bomonjee Pestonjee Master's amendment was then put to the vote, when the votes were 5 *for* and 15 *against* it, which was therefore *lost.*

Captain Martin's amendment was next put to the vote, and the proposal was also *lost.*

The original motion was then put to the vote and *carried nem con.*

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